



**United States Environmental Protection Agency**

<https://www.epa.gov/tribal-air/tribal-minor-new-source-review>

January 4, 2017

**Part 2: Submit Within 60 Days After Startup  
of Production – Emission and Production  
Information**

**FEDERAL IMPLEMENTATION PLAN FOR TRUE MINOR SOURCES IN INDIAN  
COUNTRY IN THE OIL AND NATURAL GAS PRODUCTION AND NATURAL  
GAS PROCESSING SEGMENTS OF THE OIL AND NATURAL GAS SECTOR  
Registration for New True Minor Oil and Natural Gas Sources and Minor  
Modifications at Existing True Minor Oil and Natural Gas Sources**

Please submit information to:

[Reviewing Authority  
Address  
Phone]

Air and Toxics Technical Enforcement Program  
Office of Enforcement, Compliance and Environmental Justice  
Mail Code 8ENF-AT  
1595 Wynkoop Street  
Denver, CO 80202-1129

**A. GENERAL SOURCE INFORMATION (See Instructions Below)**

<b>1. Company Name</b> Crescent Point Energy U.S. Corp		<b>2. Source Name</b> Ute Tribal 1-21-3-2E	
<b>3. Type of Oil and Natural Gas Operation</b> Oil Wellsite		<b>4. New Minor Source?</b> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
		<b>5. True Source Modification?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
<b>6. NAICS Code</b> 211111		<b>7. SIC Code</b> 1311	
<b>8. U.S. Well ID(s) or API Number(s) [if applicable]</b> 4304754414			
<b>9. Area of Indian Country</b> Uintah and Ouray	<b>10. County</b> UINTAH	<b>11a. Latitude</b> 40.21221146	<b>11b. Longitude</b> -109.7683526

**B. CONTACT INFORMATION (See Instructions Below)**

<b>1. Owner Name</b> Crescent Point Energy U.S. Corp	<b>Title</b> N/A
<b>Mailing Address</b> 555 17th St, Suite 1800, Denver, CO 80202	
<b>Email Address</b> jmcqueen@crescentpointenergy.com	
<b>Telephone Number</b> (720) 880-3610	<b>Facsimile Number</b> (303) 292-1562
<b>2. Operator Name (if different from owner)</b> Crescent Point Energy U.S. Corp	<b>Title</b>
<b>Mailing Address</b> 555 17th St, Suite 1800, Denver, CO 80202	
<b>Email Address</b> jmcqueen@crescentpointenergy.com	
<b>Telephone Number</b> (720) 880-3610	<b>Facsimile Number</b> (303) 292-1562
<b>3. Source Contact</b> Jennifer McQueen	<b>Title</b> Air Quality Specialist
<b>Mailing Address</b> 555 17th St, Suite 1800, Denver, CO 80202	
<b>Email Address</b> jmcqueen@crescentpointenergy.com	
<b>Telephone Number</b> (303) 308-6285	<b>Facsimile Number</b> (303) 292-1562

<b>4. Compliance Contact</b>		<b>Title</b>
Jennifer McQueen		Air Quality Specialist
<b>Mailing Address</b>		
555 17th St, Suite 1800, Denver, CO 80202		
<b>Email Address</b>		
jmcqueen@crescentpointenergy.com		
<b>Telephone Number</b>		<b>Facsimile Number</b>
(303) 308-6285		(303) 292-1562

### C. EMISSIONS AND OTHER SOURCE INFORMATION

Include all of the following information in the table below and as attachments to this form:

*Note: The emission estimates can be based upon actual test data or, in the absence of such data, upon procedures acceptable to the Reviewing Authority. The following procedures are generally acceptable for estimating emissions from air pollution sources: (1) unit-specific emission tests; (2) mass balance calculations; (3) published, verifiable emission factors that are applicable to the unit (i.e., manufacturer specifications); (4) other engineering calculations; or (5) other procedures to estimate emissions specifically approved by the Reviewing Authority. Guidance for estimating emissions can be found at <https://www.epa.gov/chief>.*

- ☒ Narrative description of the operations.
- ☒ Identification and description of any air pollution control equipment and compliance monitoring devices or activities.
- ☒ Type and actual amount (annually) of each fuel that will be used.
- ☒ Type of raw materials used (e.g., water for hydraulic fracturing).
- ☒ Actual, annual production rates.
- ☒ Actual operating schedules.
- ☒ Any existing limitations on source operations affecting emissions or any work practice standards, where applicable, for all regulated New Source Review (NSR) pollutants at your source. Indicate all requirements referenced in the Federal Implementation Plan (FIP) for True Minor Sources in Indian Country in the Oil and Natural Gas Production and Natural Gas Processing Segments of the Oil and Natural Gas Sector that apply to emissions units and air pollution generating activities at the source or proposed. Include statements indicating each emissions unit that is an emissions unit potentially subject to the requirements referenced in the FIP, but does not meet the definition of an affected facility under the referenced requirement, and therefore, is not subject to those requirements.
- ☒ For each emissions unit comprising the new source or modification, estimates of the total allowable (potential to emit) annual emissions at startup of production from the air pollution source for the following air pollutants: particulate matter, PM<sub>10</sub>, PM<sub>2.5</sub>, sulfur oxides ( ), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), volatile organic compound (VOC), lead (Pb) and lead compounds, fluorides (gaseous and particulate), sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>), hydrogen sulfide (H<sub>2</sub>S), total reduced sulfur (TRS) and reduced sulfur compounds, including all calculations for the estimates. Allowable annual emissions are defined as: emissions rate of an emissions unit calculated using the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical

or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation, or the effect it would have on emissions, is legally and practically enforceable. You must determine the potential for emissions within 30 days from the startup of production.

- ☒ For each emissions unit comprising the new source or modification, estimates of the total actual annual emissions during the upcoming, consecutive 12 months from the air pollution source for the following air pollutants: particulate matter (PM, PM<sub>10</sub>, PM<sub>2.5</sub>), sulfur oxides (SO<sub>x</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), volatile organic compound (VOC), lead (Pb) and lead compounds, ammonia (NH<sub>3</sub>), fluorides (gaseous and particulate), sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub>), hydrogen sulfide (H<sub>2</sub>S), total reduced sulfur (TRS) and reduced sulfur compounds, including all calculations for the estimates. Estimates of actual emissions must take into account equipment, operating conditions, and air pollution control measures. You should calculate an estimate of the actual annual emissions using estimated operating hours, production rates, in-place control equipment, and types of materials processed, stored, or combusted.

#### D. TABLE OF ESTIMATED EMISSIONS

Provide in the table below estimates of the total allowable annual emissions in tons per year (tpy) and total actual annual emissions (tpy) for the following pollutants for all emissions units comprising the new source or modification.

POLLUTANT	TOTAL ALLOWABLE ANNUAL EMISSIONS (TPY)	TOTAL ACTUAL ANNUAL EMISSIONS (TPY)
PM	0.29	0.29
PM <sub>10</sub>	0.29	0.29
PM <sub>2.5</sub>	0.29	0.29
SO <sub>x</sub>	0.00	0.00
NO <sub>x</sub>	6.54	6.54
CO	11.23	11.23
VOC	14.86	14.86
Pb	None	None

POLLUTANT	TOTAL ALLOWABLE ANNUAL EMISSIONS (TPY)	TOTAL ACTUAL ANNUAL EMISSIONS (TPY)
NH3	None	None
Fluorides	None	None
H <sub>2</sub> SO <sub>4</sub>	None	None
H <sub>2</sub> S	None	None
TRS	None	None

**ATTACHMENT A**  
**PLOT PLAN**

**ATTACHMENT B**  
**OIL AND GAS COMPOSITION ANALYSES**



# TECHNOLOGY LABORATORY, INC.

## CENTRE PROFESSIONAL OFFICE PARK

1012 Centre Avenue  
Fort Collins, Colorado 80526  
(970) 490-1414

### CERTIFICATE OF ANALYSIS

**Antea**  
**1343 S. Garfield Ave**  
**Loveland, CO 80537**

**Date Sampled:** 1/7/2014 &  
1/8/2014  
**Date Received:** 1/10/2014  
**Date Analyzed:** 2/7/2014

**Laboratory ID:** A9660  
**Field Location:** Crescent Point Roosevelt, UT (NGL)

**Matrix:** Oil

<b>Laboratory ID:</b>	<b>Sample Name:</b>	<b>RVP psi @100°F</b>	<b>Vapor Pressure psi @145°F</b>	<b>API Gravity @60°F</b>	<b>Density 60/60</b>	<b>Avg MW estimated</b>
A9660-47	Womack Daddy 3-16-3-IE A	0.18	3.2	25.6	0.901	600
A9660-49	Womack 3-83-IE A	0.20	1.0	32.8	0.861	600
A9660-51	Ute Energy 7-27- 8-IE A	0.18	1.2	34.1	0.854	600
A9660-54	ULT 15-34-3-IE A	0.24	2.0	31.1	0.87	600
A9660-56	Coleman Tribal 13-8-4-2E A	0.42	0.9	31.7	0.861	600
A9660-61	Deep Creek Solo 5-16-4-2E	0.39	2.2	30.9	0.855	600
A9660-58	ULT 12-6-4-2E A	0.18	1.6	33.0	0.86	600
A9660-62	Ute Tribal 15-32- 3-2E A	0.26	1.9	32.9	0.861	600
A9660-64	Deep Creek 2-30- 3-2E A	0.25	2.1	33.6	0.857	600
A9660-66	Coleman Tribal 7- 8-4-2E A	0.20	1.2	33.7	0.857	600
A9660-68	ULT 16-36-3-1E A	0.23	0.5	33.9	0.856	600
A9660-70	ULT 16-26-3-1E A	0.10	1.7	32.6	0.862	600
A9660-72	Ouray Valley Federal 3-41 A	0.24	0.9	30.3	0.875	600
A9660-74	Federal 14-19-6- 21	0.19	2.1	28.1	0.887	600
A9660-76	Gose 3-18-6-21 A	0.21	1.1	29.4	0.879	600



**FESCO, Ltd.**  
**1100 Fesco Ave. - Alice, Texas 78332**

**For:** Ute Energy Upstream Holdings  
P. O. Box 789  
Fort Duchesne, Utah 84026

**Sample:** Ute Tribal 1-5-4-2E  
Gas Evolved From Hydrocarbon Liquid Flashed  
From 30 psig & 160 °F to 0 psig & 70 °F

Date Sampled: 11/02/2011

Job Number: 16137.001

**CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT**

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	3.241	
Carbon Dioxide	0.400	
Methane	14.294	
Ethane	17.218	4.579
Propane	29.085	7.967
Isobutane	6.454	2.100
n-Butane	13.604	4.264
2-2 Dimethylpropane	0.070	0.027
Isopentane	4.672	1.699
n-Pentane	4.671	1.684
Hexanes	3.848	1.579
Heptanes Plus	<u>2.443</u>	<u>0.978</u>
Totals	100.000	24.876

**Computed Real Characteristics Of Heptanes Plus:**

Specific Gravity ----- 3.339 (Air=1)  
Molecular Weight ----- 94.85  
Gross Heating Value ----- 4945 BTU/CF

**Computed Real Characteristics Of Total Sample:**

Specific Gravity ----- 1.599 (Air=1)  
Compressibility (Z) ----- 0.9807  
Molecular Weight ----- 45.41  
Gross Heating Value  
Dry Basis ----- 2557 BTU/CF  
Saturated Basis ----- 2513 BTU/CF

\*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)

Results: 0.252 Gr/100 CF, 4.0 PPMV or 0.0004 Mol %

Base Conditions: 14.650 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

Analyst: TJ  
Processor: FC  
Cylinder ID: FL-12s

David Dannhaus 361-661-7015

**CHROMATOGRAPH EXTENDED ANALYSIS  
TOTAL REPORT**

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	3.241		1.999
Carbon Dioxide	0.400		0.388
Methane	14.294		5.049
Ethane	17.218	4.579	11.402
Propane	29.085	7.967	28.244
Isobutane	6.454	2.100	8.261
n-Butane	13.604	4.264	17.413
2,2 Dimethylpropane	0.070	0.027	0.111
Isopentane	4.672	1.699	7.423
n-Pentane	4.671	1.684	7.422
2,2 Dimethylbutane	0.021	0.009	0.040
Cyclopentane	0.339	0.141	0.524
2,3 Dimethylbutane	0.070	0.029	0.133
2 Methylpentane	1.270	0.524	2.410
3 Methylpentane	0.589	0.239	1.118
n-Hexane	1.559	0.637	2.959
Methylcyclopentane	0.537	0.184	0.995
Benzene	0.078	0.022	0.134
Cyclohexane	0.341	0.115	0.632
2-Methylhexane	0.116	0.054	0.256
3-Methylhexane	0.139	0.063	0.307
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.390	0.169	0.852
n-Heptane	0.284	0.130	0.627
Methylcyclohexane	0.196	0.078	0.424
Toluene	0.059	0.020	0.120
Other C8's	0.207	0.096	0.502
n-Octane	0.029	0.015	0.073
Ethylbenzene	0.003	0.001	0.007
M & P Xylenes	0.011	0.004	0.026
O-Xylene	0.002	0.001	0.005
Other C9's	0.042	0.021	0.117
n-Nonane	0.003	0.002	0.008
Other C10's	0.005	0.003	0.016
n-Decane	0.001	0.001	0.003
Undecanes (11)	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>
Totals	100.000	24.876	100.000

**Computed Real Characteristics Of Total Sample:**

Specific Gravity -----	1.599	(Air=1)
Compressibility (Z) -----	0.9807	
Molecular Weight -----	45.41	
Gross Heating Value		
Dry Basis -----	2557	BTU/CF
Saturated Basis -----	2513	BTU/CF

**FESCO, Ltd.**  
**1100 Fesco Ave. - Alice, Texas 78332**

**For:** Ute Energy Upstream Holdings  
P. O. Box 789  
Fort Duchesne, Utah 84026

**Sample:** Ute Tribal 1-5-4-2E  
Gas Evolved From Hydrocarbon Liquid Flashed  
From 46 psig & 155 °F to 0 psig & 70 °F

Date Sampled: 11/02/2011

Job Number: 16136.001

**CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT**

<b>COMPONENT</b>	<b>MOL%</b>	<b>GPM</b>
Hydrogen Sulfide*	0.001	
Nitrogen	0.557	
Carbon Dioxide	0.659	
Methane	39.329	
Ethane	17.201	4.574
Propane	19.937	5.461
Isobutane	3.856	1.255
n-Butane	8.864	2.779
2-2 Dimethylpropane	0.049	0.019
Isopentane	2.745	0.998
n-Pentane	2.971	1.071
Hexanes	2.041	0.838
Heptanes Plus	<u>1.790</u>	<u>0.736</u>
Totals	100.000	17.730

**Computed Real Characteristics Of Heptanes Plus:**

Specific Gravity ----- 3.402 (Air=1)  
Molecular Weight ----- 97.37  
Gross Heating Value ----- 5085 BTU/CF

**Computed Real Characteristics Of Total Sample:**

Specific Gravity ----- 1.249 (Air=1)  
Compressibility (Z) ----- 0.9882  
Molecular Weight ----- 35.74  
Gross Heating Value  
Dry Basis ----- 2055 BTU/CF  
Saturated Basis ----- 2020 BTU/CF

\*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)  
Results: 0.377 Gr/100 CF, 6.0 PPMV or 0.001 Mol %

Base Conditions: 14.650 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

Analyst: TJ  
Processor: FC  
Cylinder ID: FL-15

David Dannhaus 361-661-7015

**CHROMATOGRAPH EXTENDED ANALYSIS  
TOTAL REPORT**

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	0.001		0.001
Nitrogen	0.557		0.437
Carbon Dioxide	0.659		0.812
Methane	39.329		17.652
Ethane	17.201	4.574	14.473
Propane	19.937	5.461	24.600
Isobutane	3.856	1.255	6.271
n-Butane	8.864	2.779	14.416
2,2 Dimethylpropane	0.049	0.019	0.099
Isopentane	2.745	0.998	5.542
n-Pentane	2.971	1.071	5.998
2,2 Dimethylbutane	0.016	0.007	0.039
Cyclopentane	0.226	0.094	0.444
2,3 Dimethylbutane	0.041	0.017	0.099
2 Methylpentane	0.663	0.274	1.599
3 Methylpentane	0.292	0.119	0.704
n-Hexane	0.803	0.328	1.936
Methylcyclopentane	0.306	0.105	0.721
Benzene	0.053	0.015	0.116
Cyclohexane	0.189	0.064	0.445
2-Methylhexane	0.084	0.039	0.236
3-Methylhexane	0.098	0.044	0.275
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.256	0.111	0.711
n-Heptane	0.239	0.110	0.670
Methylcyclohexane	0.177	0.071	0.486
Toluene	0.049	0.016	0.126
Other C8's	0.208	0.096	0.641
n-Octane	0.046	0.023	0.147
Ethylbenzene	0.004	0.002	0.012
M & P Xylenes	0.011	0.004	0.033
O-Xylene	0.002	0.001	0.006
Other C9's	0.050	0.025	0.177
n-Nonane	0.004	0.002	0.014
Other C10's	0.005	0.003	0.020
n-Decane	0.001	0.001	0.004
Undecanes (11)	<u>0.008</u>	<u>0.005</u>	<u>0.038</u>
Totals	100.000	17.730	100.000

**Computed Real Characteristics Of Total Sample:**

Specific Gravity	1.249	(Air=1)
Compressibility (Z)	0.9882	
Molecular Weight	35.74	
Gross Heating Value		
Dry Basis	2055	BTU/CF
Saturated Basis	2020	BTU/CF

**FESCO, Ltd.**  
**1100 Fesco Ave. - Alice, Texas 78332**

**For:** Ute Energy Upstream Holdings  
P. O. Box 789  
Fort Duchesne, Utah 84026

**Sample:** Ute Tribal 10-30-3-2E  
Gas Evolved from Hydrocarbon Liquid Flashed  
From 45 psig & 160 °F to 0 psig & 70 °F

Date Sampled: 11/02/2011

Job Number: 16135.001

**CHROMATOGRAPH EXTENDED ANALYSIS - SUMMATION REPORT**

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.494	
Carbon Dioxide	0.716	
Methane	37.302	
Ethane	19.192	5.103
Propane	19.627	5.376
Isobutane	3.482	1.133
n-Butane	9.005	2.823
2-2 Dimethylpropane	0.048	0.018
Isopentane	2.597	0.944
n-Pentane	3.362	1.212
Hexanes	2.303	0.945
Heptanes Plus	<u>1.872</u>	<u>0.760</u>
Totals	100.000	18.315

**Computed Real Characteristics Of Heptanes Plus:**

Specific Gravity ----- 3.363 (Air=1)  
Molecular Weight ----- 96.22  
Gross Heating Value ----- 5015 BTU/CF

**Computed Real Characteristics Of Total Sample:**

Specific Gravity ----- 1.265 (Air=1)  
Compressibility (Z) ----- 0.9878  
Molecular Weight ----- 36.20  
Gross Heating Value  
Dry Basis ----- 2080 BTU/CF  
Saturated Basis ----- 2045 BTU/CF

\*Hydrogen Sulfide tested in laboratory by Stained Tube Method (GPA 2377)

Results: 0.063 Gr/100 CF, 1.0 PPMV or 0.0001 Mol %

Base Conditions: 14.650 PSI & 60 Deg F

Certified: FESCO, Ltd. - Alice, Texas

Analyst: TJ  
Processor: AM  
Cylinder ID: FL-7s

David Dannhaus 361-661-7015

**CHROMATOGRAPH EXTENDED ANALYSIS  
TOTAL REPORT**

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.494		0.382
Carbon Dioxide	0.716		0.870
Methane	37.302		16.530
Ethane	19.192	5.103	15.940
Propane	19.627	5.376	23.906
Isobutane	3.482	1.133	5.590
n-Butane	9.005	2.823	14.457
2,2 Dimethylpropane	0.048	0.018	0.096
Isopentane	2.597	0.944	5.175
n-Pentane	3.362	1.212	6.700
2,2 Dimethylbutane	0.017	0.007	0.040
Cyclopentane	0.230	0.095	0.446
2,3 Dimethylbutane	0.040	0.016	0.095
2 Methylpentane	0.632	0.261	1.504
3 Methylpentane	0.310	0.126	0.738
n-Hexane	1.074	0.439	2.556
Methylcyclopentane	0.325	0.111	0.756
Benzene	0.077	0.021	0.166
Cyclohexane	0.245	0.083	0.569
2-Methylhexane	0.084	0.039	0.232
3-Methylhexane	0.088	0.040	0.244
2,2,4 Trimethylpentane	0.000	0.000	0.000
Other C7's	0.230	0.100	0.630
n-Heptane	0.284	0.130	0.786
Methylcyclohexane	0.206	0.082	0.559
Toluene	0.046	0.015	0.117
Other C8's	0.168	0.078	0.511
n-Octane	0.039	0.020	0.123
Ethylbenzene	0.002	0.001	0.006
M & P Xylenes	0.012	0.005	0.035
O-Xylene	0.002	0.001	0.006
Other C9's	0.034	0.017	0.119
n-Nonane	0.008	0.004	0.028
Other C10's	0.013	0.008	0.051
n-Decane	0.003	0.002	0.012
Undecanes (11)	<u>0.006</u>	<u>0.004</u>	<u>0.025</u>
Totals	100.000	18.315	100.000

**Computed Real Characteristics Of Total Sample:**

Specific Gravity	1.265	(Air=1)
Compressibility (Z)	0.9878	
Molecular Weight	36.20	
Gross Heating Value		
Dry Basis	2080	BTU/CF
Saturated Basis	2045	BTU/CF

# QUESTAR APPLIED TECHNOLOGY

1210 D. Street, Rock Springs, Wyoming 82901

(307) 352-7292

LIMS ID:	N/A	Description:	Coleman Tribal 2-18-4-2E
Analysis Date/Time:	6/27/2011 8:12 AM	Field:	Leland Bench
Analyst Initials:	PRP	ML#:	Ute Energy
Instrument ID:	Instrument 1	GC Method:	Quesbtex
Data File:	QPC12.D		
Date Sampled:	6/22/2011		

Component	Mol%	Wt%	LV%
Methane	78.3766	58.6881	68.9498
Ethane	9.8817	13.8690	13.7534
Propane	6.7479	13.8884	9.6562
Isobutane	0.9285	2.5189	1.5774
n-Butane	1.7060	4.6282	2.7933
Neopentane	0.0101	0.0341	0.0201
Isopentane	0.4236	1.4264	0.8052
n-Pentane	0.3980	1.3404	0.7486
2,2-Dimethylbutane	0.0019	0.0078	0.0042
2,3-Dimethylbutane	0.0252	0.1012	0.0535
2-Methylpentane	0.0863	0.3471	0.1860
3-Methylpentane	0.0357	0.1436	0.0756
n-Hexane	0.0995	0.4003	0.2125
Heptanes	0.1398	0.6137	0.2914
Octanes	0.0236	0.1253	0.0612
Nonanes	0.0113	0.0643	0.0301
Decanes plus	0.0022	0.0146	0.0070
Nitrogen	0.6365	0.8322	0.3624
Carbon Dioxide	0.4656	0.9564	0.4121
Oxygen	0.0000	0.0000	0.0000
Hydrogen Sulfide	0.0000	0.0000	0.0000
Total	100.0000	100.0000	100.0000

## Global Properties

## Units

Gross BTU/Real CF	1284.6	BTU/SCF at 60°F and 14.73 psia
Sat. Gross BTU/Real CF	1263.4	BTU/SCF at 60°F and 14.73 psia
Gas Compressibility (Z)	0.9962	
Specific Gravity	0.7413	air=1
Avg Molecular Weight	21.425	gm/mole
Propane GPM	1.849348	gal/MCF
Butane GPM	0.839526	gal/MCF
Gasoline GPM	0.460696	gal/MCF
26# Gasoline GPM	0.998320	gal/MCF
Total GPM	3.150733	gal/MCF
Base Mol%	100.076	%v/v

Sample Temperature:	132	°F
Sample Pressure:	71	psig
H2S Length of Stain Tube	N/A	ppm

Component	Mol%	Wt%	LV%
Benzene	0.0064	0.0235	0.0094
Toluene	0.0060	0.0259	0.0105
Ethylbenzene	0.0006	0.0029	0.0012
M&P Xylene	0.0021	0.0105	0.0043
O-Xylene	0.0005	0.0023	0.0009
2,2,4-Trimethylpentane	0.0083	0.0442	0.0216
Cyclopentane	0.0000	0.0000	0.0000
Cyclohexane	0.0210	0.0825	0.0371
Methylcyclohexane	0.0189	0.0868	0.0395
Description:	Coleman Tribal 2-18-4-2E		

#### GRI GlyCalc Information

Component	Mol%	Wt%	LV%
Carbon Dioxide	0.4656	0.9564	0.4121
Hydrogen Sulfide	0.0000	0.0000	0.0000
Nitrogen	0.6365	0.8322	0.3624
Methane	78.3766	58.6881	68.9498
Ethane	9.8817	13.8690	13.7534
Propane	6.7479	13.8884	9.6562
Isobutane	0.9285	2.5189	1.5774
n-Butane	1.7060	4.6282	2.7933
Isopentane	0.4337	1.4605	0.8253
n-Pentane	0.3980	1.3404	0.7486
Cyclopentane	0.0000	0.0000	0.0000
n-Hexane	0.0995	0.4003	0.2125
Cyclohexane	0.0210	0.0825	0.0371
Other Hexanes	0.1491	0.5997	0.3193
Heptanes	0.0792	0.3508	0.1733
Methylcyclohexane	0.0189	0.0868	0.0395
2,2,4 Trimethylpentane	0.0083	0.0442	0.0216
Benzene	0.0064	0.0235	0.0094
Toluene	0.0060	0.0259	0.0105
Ethylbenzene	0.0006	0.0029	0.0012
Xylenes	0.0026	0.0128	0.0052
C8+ Heavies	0.0339	0.1885	0.0919
Subtotal	100.0000	100.0000	100.0000
Oxygen	0.0000	0.0000	0.0000
Total	100.0000	100.0000	100.0000



**ATTACHMENT C**  
**FACILITY EQUIPMENT EMISSION CALCULATIONS**

**Crescent Point Energy U.S. Corp**  
**Ute Tribal 1-21-3-2E**  
**Narrative Description**

Hydrocarbons from a single heavy crude oil well is collected at the Ute Tribal 1-21-3-2E production facility. The hydrocarbon extraction from the wells is assisted by an artificial lift driven by a generator and the hydrocarbons are routed to a heater treater. The heater treater separate the hydrocarbon into three production streams: gas, oil, and water. The produced gas is routed to a gas sales line. The crude oil is routed to three 1,000-bbl crude oil storage tanks and the produced water is routed to one 1,000-bbl produced water storage tanks. Each of the crude oil storage tanks and the produced water tanks are heated by tank heaters. The crude oil and produced water is transported offsite using haul trucks. Methanol and glycol storage occurs on site in small storage tanks. Fugitive emissions also occur from component leaks.

Produced gas from the field is collected and dried at a compressor station. Once the produced gas is dried at the compressor station, it is rerouted back into the field to power the pilot lights, engines, and heaters.

**Company:** Crescent Point Energy U.S. Corp  
**Facility:** Ute Tribal 1-21-3-2E

**Oil Production:** 750 bbl/day  
273,750 bbl/year  
**Gas Production:** 250 Mscf/day  
91,250 Mscf/year

**TABLE 1: Uncontrolled Potential to Emit Summary Sheet**

Emissions Source	NO <sub>x</sub>		CO		VOC		Total HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Crude Oil Storage Tanks - TK1 - TK3	n/a	n/a	n/a	n/a	21.32	93.40	0.83	3.66
Produced Water Tank(s)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Heater/Treater(s)	0.14	0.59	0.11	0.50	0.01	0.03	0.00	0.01
Tank Heaters	0.33	1.42	0.27	1.20	0.02	0.08	0.01	0.03
Oil Tank Truck Loading	n/a	n/a	n/a	n/a	5.54	5.84	0.05	0.23
Combustor(s)	0.04	0.19	0.20	0.87	0.09	0.39	n/a	n/a
Fugitive Emissions	n/a	n/a	n/a	n/a	0.19	0.82	0.01	0.03
Methanol Tank - 55-gallon drum	n/a	n/a	n/a	n/a	0.00	0.00	n/a	n/a
Glycol Tank - 55-gallon drum	n/a	n/a	n/a	n/a	0.00	0.00	n/a	n/a
Engine 1 (E-1)	0.99	4.33	1.98	8.66	1.15	5.03	0.10	0.43
<b>Total</b>	<b>1.49</b>	<b>6.54</b>	<b>2.56</b>	<b>11.23</b>	<b>28.32</b>	<b>105.59</b>	<b>1.00</b>	<b>4.38</b>

Emissions Source	PM		PM <sub>10</sub>		PM <sub>2.5</sub>		SO <sub>2</sub>	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Crude Oil Storage Tanks - TK1 - TK3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Produced Water Tank(s)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Heater/Treater(s)	0.01	0.05	0.01	0.05	0.01	0.05	n/a	n/a
Tank Heaters	0.02	0.11	0.02	0.11	0.02	0.11	n/a	n/a
Oil Tank Truck Loading	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Combustor(s)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fugitive Emissions	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Methanol Tank - 55-gallon drum	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Glycol Tank - 55-gallon drum	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Engine 1 (E-1)	0.03	0.14	0.03	0.13	0.03	0.13	0.00	0.00
<b>Total</b>	<b>0.07</b>	<b>0.29</b>	<b>0.07</b>	<b>0.29</b>	<b>0.07</b>	<b>0.29</b>	<b>0.00</b>	<b>0.00</b>

**Notes:**

BBL = Barrels  
lb/hr = Pounds per hour  
tpy = Tons per year  
PM = Particulate matter  
PM10 = Particulate matter of 10 microns or less  
PM2.5 = Particulate matter of 2.5 microns or less

NO<sub>x</sub> = Nitrogen oxides  
CO = Carbon monoxide  
VOC = Volatile organic compounds  
HAPs = Hazardous air pollutants  
SO<sub>2</sub> = Sulfur dioxides  
n/a = Not applicable

**Company:** Crescent Point Energy U.S. Corp  
**Facility:** Ute Tribal 1-21-3-2E

**Oil Production:** 750 bbl/day  
273,750 bbl/year  
**Gas Production:** 250 Mscf/day  
91,250 Mscf/year

**TABLE 1: Uncontrolled Potential to Emit Summary Sheet (Continued)**

Emissions Source	Benzene		Toluene		Ethylbenzene		Xylene	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Crude Oil Storage Tanks - TK1 - TK3	0.041	0.179	0.036	0.156	0.002	0.011	0.011	0.047
Produced Water Tank(s)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Heater/Treater(s)	0.000	0.000	0.000	0.000	n/a	n/a	n/a	n/a
Tank Heaters	0.000	0.000	0.000	0.000	n/a	n/a	n/a	n/a
Oil Tank Truck Loading	0.003	0.011	0.002	0.010	0.000	0.001	0.001	0.003
Combustor(s)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fugitive Emissions	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000
Methanol Tank - 55-gallon drum	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Glycol Tank - 55-gallon drum	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Engine 1 (E-1)	0.005	0.022	n/a	n/a	n/a	n/a	n/a	n/a
<b>Total</b>	<b>0.049</b>	<b>0.214</b>	<b>0.038</b>	<b>0.167</b>	<b>0.003</b>	<b>0.011</b>	<b>0.011</b>	<b>0.050</b>

Emissions Source	Acetaldehyde		Acrolein		n-Hexane		Formaldehyde	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Crude Oil Storage Tanks - TK1 - TK3	n/a	n/a	n/a	n/a	0.745	3.263	n/a	n/a
Produced Water Tank(s)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Heater/Treater(s)	n/a	n/a	n/a	n/a	0.002	0.011	0.000	0.000
Tank Heaters	n/a	n/a	n/a	n/a	0.006	0.026	0.000	0.001
Oil Tank Truck Loading	n/a	n/a	n/a	n/a	0.047	0.204	n/a	n/a
Combustor(s)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fugitive Emissions	n/a	n/a	n/a	n/a	0.005	0.024	n/a	n/a
Methanol Tank - 55-gallon drum	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Glycol Tank - 55-gallon drum	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Engine 1 (E-1)	0.009	0.039	0.008	0.037	n/a	n/a	0.066	0.288
<b>Total</b>	<b>0.009</b>	<b>0.039</b>	<b>0.008</b>	<b>0.037</b>	<b>0.805</b>	<b>3.527</b>	<b>0.066</b>	<b>0.290</b>

**Notes:**

BBL = Barrels

lb/hr = Pounds per hour

tpy = Tons per year

PM = Particulate matter

PM10 = Particulate matter of 10 microns or less

PM2.5 = Particulate matter of 2.5 microns or less

NOx = Nitrogen oxides

CO = Carbon monoxide

VOC = Volatile organic compounds

HAPs = Hazardous air pollutants

SO2 = Sulfur dioxides

n/a = Not applicable

**Company:** Crescent Point Energy U.S. Corp  
**Facility:** Ute Tribal 1-21-3-2E

**Oil Production:** 750 bbl/day  
273,750 bbl/year  
**Gas Production:** 250 Mscf/day  
91,250 Mscf/year

**TABLE 2: Total Actual Emissions Summary Sheet**

Emissions Source	NO <sub>x</sub>		CO		VOC		Total HAPs	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Crude Oil Storage Tanks - TK1 - TK3	n/a	n/a	n/a	n/a	1.07	4.67	0.04	0.18
Produced Water Tank(s)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Heater/Treater(s)	0.14	0.59	0.11	0.50	0.01	0.03	0.00	0.01
Tank Heaters	0.33	1.42	0.27	1.20	0.02	0.08	0.01	0.03
Oil Tank Truck Loading	n/a	n/a	n/a	n/a	5.54	5.84	0.05	0.23
Combustor(s)	0.04	0.19	0.20	0.87	0.09	0.39	n/a	n/a
Fugitive Emissions	n/a	n/a	n/a	n/a	0.19	0.82	0.01	0.03
Methanol Tank - 55-gallon drum	n/a	n/a	n/a	n/a	0.00	0.00	n/a	n/a
Glycol Tank - 55-gallon drum	n/a	n/a	n/a	n/a	0.00	0.00	n/a	n/a
Engine 1 (E-1)	0.99	4.33	1.98	8.66	0.69	3.03	0.05	0.21
<b>Total</b>	<b>1.49</b>	<b>6.54</b>	<b>2.56</b>	<b>11.23</b>	<b>7.60</b>	<b>14.86</b>	<b>0.16</b>	<b>0.69</b>

Emissions Source	PM		PM <sub>10</sub>		PM <sub>2.5</sub>		SO <sub>2</sub>	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Crude Oil Storage Tanks - TK1 - TK3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Produced Water Tank(s)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Heater/Treater(s)	0.01	0.05	0.01	0.05	0.01	0.05	n/a	n/a
Tank Heaters	0.02	0.11	0.02	0.11	0.02	0.11	n/a	n/a
Oil Tank Truck Loading	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Combustor(s)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fugitive Emissions	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Methanol Tank - 55-gallon drum	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Glycol Tank - 55-gallon drum	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Engine 1 (E-1)	0.03	0.14	0.03	0.13	0.03	0.13	0.00	0.00
<b>Total</b>	<b>0.07</b>	<b>0.29</b>	<b>0.07</b>	<b>0.29</b>	<b>0.07</b>	<b>0.29</b>	<b>0.00</b>	<b>0.00</b>

Oil tank emissions are routed to a combustor with a 95% destruction efficiency

**Notes:**

BBL = Barrels  
lb/hr = Pounds per hour  
tpy = Tons per year

PM = Particulate matter

PM10 = Particulate matter of 10 microns or less

PM2.5 = Particulate matter of 2.5 microns or less

NO<sub>x</sub> = Nitrogen oxides

CO = Carbon monoxide

VOC = Volatile organic compounds

HAPs = Hazardous air pollutants

SO<sub>2</sub> = Sulfur dioxides

n/a = Not applicable

**Company:** Crescent Point Energy U.S. Corp  
**Facility:** Ute Tribal 1-21-3-2E

**Oil Production:** 750 bbl/day  
273,750 bbl/year  
**Gas Production:** 250 Mscf/day  
91,250 Mscf/year

**TABLE 2: Total Actual Emissions Summary Sheet (Continued)**

Emissions Source	Benzene		Toluene		Ethylbenzene		Xylene	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Crude Oil Storage Tanks - TK1 - TK3	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00
Produced Water Tank(s)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Heater/Treater(s)	0.000	0.000	0.000	0.000	n/a	n/a	n/a	n/a
Tank Heaters	0.000	0.000	0.000	0.000	n/a	n/a	n/a	n/a
Oil Tank Truck Loading	0.003	0.011	0.002	0.010	0.000	0.001	0.001	0.003
Combustor(s)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fugitive Emissions	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000
Methanol Tank - 55-gallon drum	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Glycol Tank - 55-gallon drum	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Engine 1 (E-1)	0.003	0.011	n/a	n/a	n/a	n/a	n/a	n/a
<b>Total</b>	<b>0.007</b>	<b>0.033</b>	<b>0.004</b>	<b>0.019</b>	<b>0.000</b>	<b>0.001</b>	<b>0.001</b>	<b>0.006</b>

Emissions Source	Acetaldehyde		Acrolein		n-Hexane		Formaldehyde	
	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
Crude Oil Storage Tanks - TK1 - TK3	n/a	n/a	n/a	n/a	0.04	0.16	n/a	n/a
Produced Water Tank(s)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Heater/Treater(s)	n/a	n/a	n/a	n/a	0.002	0.011	0.000	0.000
Tank Heaters	n/a	n/a	n/a	n/a	0.006	0.026	0.000	0.001
Oil Tank Truck Loading	n/a	n/a	n/a	n/a	0.047	0.204	n/a	n/a
Combustor(s)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fugitive Emissions	n/a	n/a	n/a	n/a	0.005	0.024	n/a	n/a
Methanol Tank - 55-gallon drum	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Glycol Tank - 55-gallon drum	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Engine 1 (E-1)	0.004	0.020	0.004	0.018	n/a	n/a	0.033	0.144
<b>Total</b>	<b>0.004</b>	<b>0.020</b>	<b>0.004</b>	<b>0.018</b>	<b>0.098</b>	<b>0.427</b>	<b>0.033</b>	<b>0.146</b>

**Notes:**  
BBL = Barrels  
lb/hr = Pounds per hour  
tpy = Tons per year  
PM = Particulate matter  
PM10 = Particulate matter of 10 microns or less  
PM2.5 = Particulate matter of 2.5 microns or less  
NOx = Nitrogen oxides  
CO = Carbon monoxide  
VOC = Volatile organic compounds  
HAPs = Hazardous air pollutants  
SO2 = Sulfur dioxides  
n/a = Not applicable

**Crescent Point Energy U.S. Corp**  
**Ute Tribal 1-21-3-2E**  
**Average Oil Analysis Detail Sheet**

Mole (Vol.) Percent (%)	Component	Wellsite Name		
		Ute Tribal 15-18-4-2E	Ute Tribal 10-30-3-2E	Ute Tribal 1-5-4-2E
30.3083%	Methane	14.2940%	37.3020%	39.3290%
17.8703%	Ethane	17.2180%	19.1920%	17.2010%
48.1787%	Total HC (Non-VOC)	31.5120%	56.4940%	56.5300%
22.8830%	Propane	29.0850%	19.6270%	19.9370%
4.5973%	i-Butane	6.4540%	3.4820%	3.8560%
10.4910%	n-Butane	13.6040%	9.0050%	8.8640%
3.3380%	i-Pentane	4.6720%	2.5970%	2.7450%
3.9887%	n-Pentane	5.0800%	3.6400%	3.2460%
1.9680%	Hexanes	2.8280%	1.5690%	1.5070%
0.9570%	Heptanes	1.1250%	0.8920%	0.8540%
0.2323%	Octanes	0.2360%	0.2070%	0.2540%
0.0470%	Nonanes	0.0450%	0.0420%	0.0540%
0.0140%	Decanes+	0.0060%	0.0220%	0.0140%
0.0693%	Benzene	0.0780%	0.0770%	0.0530%
0.0513%	Toluene	0.0590%	0.0460%	0.0490%
0.0030%	Ethylbenzene	0.0030%	0.0020%	0.0040%
0.0133%	Xylene	0.0130%	0.0140%	0.0130%
1.1453%	n-Hexane	1.5590%	1.0740%	0.8030%
0.0000%	2,2,4-Trimethylpentane	0.0000%	0.0000%	0.0000%
49.7987%	Total NMNE VOC <sup>1</sup>	64.8470%	42.2960%	42.2530%
0.5917%	Carbon Dioxide	0.4000%	0.7160%	0.6590%
1.4307%	Nitrogen	3.2410%	0.4940%	0.5570%
0.0005%	Hydrogen Sulfide	0.0004%	0.0001%	0.0010%
0.0000%	Helium	0.0000%	0.0000%	0.0000%
100.0002%		100.0004%	100.0001%	100.0000%

158.33	Separator Temperature in degrees F	160	160	155
40.33	Separator Pressure in psia	30	45	46
34.44	API Gravity	32.82	36.89	33.61
1.37	Gas Specific Gravity	1.599	1.265	1.249
39.12	Molecular Wt	45.41	36.20	35.74
9.03	Gas-to-Oil Ratio (scf/bbl)	6.80	11.50	8.80
2,193	LHV BTU Content (Btu/scf):	2,513	2,045	2,020

<sup>1</sup> NMNE VOC = Non-methane, non-ethane volatile organic compounds

**Crescent Point Energy U.S. Corp**  
**Ute Tribal 1-21-3-2E**  
**LOW PRESSURE GAS COMPOSITION CALCULATIONS**  
**(REPRESENTATIVE SAMPLE COLLECTED FROM COLEMAN TRIBAL 2-18-4-2E WELLSITE ON 6/27/2011)**

Component	Molecular Weight (lb/lb-mol)	Mole (Vol.) Percent (%)	Mole Frac.	Gas Weight (lb/lb-mol)	Weight Percent (%)	LHV BTU Content	
						Btu/scf	Btu/scf*Mole Frac
Methane	16.043	78.3766%	0.78377	12.57	58.680%	909.4	712.8
Ethane	30.069	9.8817%	0.09882	2.97	13.867%	1618.7	160.0
<i>Total HC (Non-VOC)</i>		<i>88.2583%</i>	<i>0.88258</i>	<i>15.55</i>	<i>72.546%</i>	<i>2528.1</i>	<i>872.7</i>
Propane	44.096	6.7479%	0.06748	2.98	13.886%	2314.90	156.21
i-Butane	58.122	0.9285%	0.00929	0.54	2.518%	3000.40	27.86
n-Butane	58.122	1.7060%	0.01706	0.99	4.627%	3010.80	51.36
i-Pentane	72.150	0.4337%	0.00434	0.31	1.460%	3699.00	16.04
n-Pentane	72.150	0.3980%	0.00398	0.29	1.340%	3703.90	14.74
Hexanes	86.110	0.1701%	0.00170	0.15	0.684%	4403.90	7.49
Heptanes	100.210	0.0981%	0.00098	0.10	0.459%	5100.30	5.00
Octanes	114.229	0.0339%	0.00034	0.04	0.181%	5796.20	1.96
Nonanes	128.260	0.0000%	0.00000	0.00	0.000%	6493.60	0.00
Decanes+	142.290	0.0000%	0.00000	0.00	0.000%	7189.90	0.00
Benzene	78.120	0.0064%	0.00006	0.00	0.023%	0.00	0.00
Toluene	92.130	0.0060%	0.00006	0.01	0.026%	0.00	0.00
Ethylbenzene	106.160	0.0006%	0.00001	0.00	0.003%	0.00	0.00
Xylene	106.160	0.0026%	0.00003	0.00	0.013%	0.00	0.00
n-Hexane	86.177	0.0995%	0.00100	0.09	0.400%	0.00	0.00
2,2,4-Trimethylpentane	114.230	0.0083%	0.00008	0.01	0.044%	0.00	0.00
<i>Total NMNE VOC</i>		<i>10.64%</i>	<i>0.10640</i>	<i>5.50</i>	<i>25.66%</i>	<i>44712.90</i>	<i>280.67</i>
Carbon Dioxide	44.01	0.4656%	0.00466	0.20	0.956%	0	0
Nitrogen	28.02	0.6365%	0.00637	0.18	0.832%	0	0
Hydrogen Sulfide	34.08	0.0000%	0.00000	0.00	0.000%	586.8	0
Helium	4.00	0.0000%	0.00000	0.00	0.000%	0	0
Oxygen	31.999	0.0000%	0.00000	0.00	0.000%	0	0
<b>Totals</b>		<b>100.00%</b>	<b>100.00%</b>	<b>21.43</b>	<b>100.00%</b>		<b>1153.39</b>

Fraction of NMNE VOC<sup>1</sup>:  
Gas Specific Gravity:  
LHV BTU Content (Btu/scf):

**0.1064**  
**0.73966**  
**1153.39**

1 NMNE VOC = Non-methane, non-ethane volatile organic compounds



Crescent Point Energy U.S. Corp  
Ute Tribal 1-21-3-2E - Flash Gas Analysis  
Hydrocarbon Liquids Tank Detail Sheet

Source ID Number	TK1 - TK3	Gas Flashed Per Day	6,775.00 scf/day
Potential operation	8760 hr/yr	Gas Flashed Per Year	2472.88 Mscf/year
Daily Threshold Production	750 bpd		
Annual throughput	273,750 bbl/yr	Gas-to-Oil Ratio (scf/bbl)	9.03 scf/bbl

Component	Molecular Weight (lb/lb-mole)	Mole (Vol.) Percent (%)	Gas Weight (lb/lb-mol)	Weight Percent (%)	Flash Rate (Mscf/day)	Flash Rate (lb/hr)	Flash Rate (tons/yr)
Methane	16.043	30.3083%	4.8624	12.4197%	2.0534	3.622	15.8628
Ethane	30.069	17.8703%	5.3734	13.7251%	1.2107	4.002	17.5301
Propane	44.097	22.8830%	10.0907	25.7742%	1.5503	7.516	32.9196
i-Butane	58.124	4.5973%	2.6722	6.8254%	0.3115	1.990	8.7175
n-Butane	58.124	10.4910%	6.0978	15.5753%	0.7108	4.542	19.8932
i-Pentane	72.151	3.3380%	2.4084	6.1517%	0.2261	1.794	7.8571
n-Pentane	72.151	3.9887%	2.8779	7.3508%	0.2702	2.144	9.3886
Hexanes	86.178	1.9680%	1.6960	4.3320%	0.1333	1.263	5.5329
Heptanes	100.205	0.9570%	0.9590	2.4494%	0.0648	0.714	3.1285
Octanes	114.232	0.2323%	0.2654	0.6779%	0.0157	0.198	0.8658
Nonanes	128.259	0.0470%	0.0603	0.1540%	0.0032	0.045	0.1967
Decanes +	142.286	0.0140%	0.0199	0.0509%	0.0009	0.015	0.0650
Benzene	78.114	0.0693%	0.0542	0.1383%	0.0047	0.040	0.1767
Toluene	92.141	0.0513%	0.0473	0.1208%	0.0035	0.035	0.1543
Ethylbenzene	106.168	0.0030%	0.0032	0.0081%	0.0002	0.002	0.0104
Xylenes	106.168	0.0133%	0.0142	0.0362%	0.0009	0.011	0.0462
n-Hexane	86.178	1.1453%	0.9870	2.5211%	0.0776	0.735	3.2200
2,2,4-Trimethylpentane	114.229	0.0000%	0.0000	0.0000%	0.0000	0.000	0.0000
Carbon Dioxide	44.010	0.5917%	0.2604	0.6651%	0.0401	0.194	0.8495
Nitrogen	28.013	1.4307%	0.4008	1.0237%	0.0969	0.299	1.3075
Hydogen Sulfide	34.076	0.0005%	0.0002	0.0004%	0.0000	0.000	0.0006
Helium	4.003	0.0000%	0.0000	0.0000%	0.0000	0.000	0.0000
Oxygen	31.999	0.0000%	0.0000	0.0000%	0.0000	0.000	0.0000
VOC TOTAL		49.80%	28.2533	72.17%	3.37	21.04	92.17
HAP SUBTOTAL		1.28%	1.1058	2.82%	0.09	0.82	3.608
TOTAL		100.00%	39.1504	100.00%	6.78	29.16	127.72

Separator Temperature (° F):	158.3333333
Separator Pressure (psia):	40.33333333
API Gravity:	33.6
Gas Specific Gravity:	1.371
Molecular Weight:	39.117
Gas-to-Oil Ratio (scf/bbl):	9.033333333

**Crescent Point Energy U.S. Corp**  
**Ute Tribal 1-21-3-2E**  
**Flash Gas Tank Emissions Summary Detail Sheet**

Source ID Number	TK1 - TK3	Potential operation	8,760 hr/yr
		Recent Production	750.0 bpd
Tank Description	Crude Oil Storage	Annual throughput	273,750.0 bbl/yr 11,497,500 gal/yr

**Potential Flash Emissions**

Pollutant	Hrs of Operation (hrs/yr)	Estimated Flash Losses			Source of Emission Factor	Ratio of HAPs to VOC Emissions
		(lb/hr)	(tpy)	(lb/yr)		
VOC	8,760	21.0440	92.1726	184,345.28	Flash Gas Analysis	-
HAPs	8,760	0.8237	3.6076	7,215.21	Flash Gas Analysis	3.9140%
Benzene	8,760	0.0403	0.1767	353.37	Flash Gas Analysis	0.1917%
Toluene	8,760	0.0352	0.1543	308.61	Flash Gas Analysis	0.1674%
Ethylbenzene	8,760	0.0024	0.0104	20.78	Flash Gas Analysis	0.0113%
Xylene	8,760	0.0105	0.0462	92.36	Flash Gas Analysis	0.0501%
N-Hexane	8,760	0.7352	3.2200	6,440.08	Flash Gas Analysis	3.4935%
Methane <sup>2</sup>	8,760	3.6217	15.8628	31,725.65	Flash Gas Analysis	17.2099%
Carbon Dioxide <sup>2</sup>	8,760	0.1939	0.8495	1,698.99	Flash Gas Analysis	0.9216%
Nitrous Oxide	8,760	n/a	n/a	n/a	No data available	

**Crescent Point Energy U.S. Corp**  
**Ute Tribal 1-21-3-2E**  
**Storage, Working, and Breathing Emissions Detail Sheet**

Source ID Number	TK1 - TK3	Potential operation	8,760 hr/yr
		Recent Production	750.0 bpd
Tank Description	3 1000-bbl tanks		
Tank Usage	Crude Oil Storage	Annual throughput	273,750.0 bbl/yr
Tank Capacity	3,000 bbl		11,497,500 gal/yr
Number of tanks	3		

**Potential emissions per tank**

Pollutant	Hrs of Operation	Estimated Storage/Working/Breathing Losses			Source of Emission Factor
	(hrs/yr)	(lb/hr)	(tpy)	(lb/yr)	
VOC - Working	8,760	0.09	0.41	815.56	TANKS 4.0.9D
VOC - Breathing	8,760	0.00	0.00	0.00	TANKS 4.0.9D
Total		0.09	0.41	815.56	TANKS 4.0.9D

**Potential emissions all tanks**

Pollutant	Hrs of Operation	Estimated Flash Losses			Source of Emission Factor	Ratio of HAPs to VOC Emissions
	(hrs/yr)	(lb/hr)	(tpy)	(lb/yr)		
VOC	8,760	0.28	1.22	2446.7	TANKS 4.0.9D	-
HAPs	8,760	0.01	0.048	95.8	Flash Gas Analysis	3.9140%
Benzene	8,760	0.0005	0.002	4.7	Flash Gas Analysis	0.1917%
Toluene	8,760	0.0005	0.002	4.1	Flash Gas Analysis	0.1674%
Ethylbenzene	8,760	0.0000	0.000	0.3	Flash Gas Analysis	0.0113%
Xylene	8,760	0.0001	0.001	1.2	Flash Gas Analysis	0.0501%
N-Hexane	8,760	0.0098	0.043	85.5	Flash Gas Analysis	3.4935%
Methane	8,760	0.0000	0.000	0.0	Flash Gas Analysis	17.2099%
Carbon dioxide	8,760	0.0000	0.000	0.0	Flash Gas Analysis	0.9216%
Nitrous Oxides		n/a	n/a	n/a	n/a	0.0000%

<sup>1</sup> See TANKS 4.0.9D output attached.

<sup>2</sup> Total wellsite oil throughput divided by the number of storage tanks used to calculate emissions.

Note: HAP emissions determined by multiplying by ratio of each HAP to VOCs calculated on the "Flash Gas Tank Emissions Summary Detail Sheet"

**Crescent Point Energy U.S. Corp**  
**Ute Tribal 1-21-3-2E**  
**Total Tank Emissions Detail Sheet**

Source ID Number	TK1 - TK3	Potential operation	8,760 hr/yr
Tank Usage	Crude Oil Storage	Recent Production	750.0 bpd
		Annual throughput	273,750.0 bbl/yr 11,497,500 gal/yr

**Potential Emissions - Flashing, Storage, Working, and Breathing**

Pollutant	Hrs of Operation (hrs/yr)	(lb/hr)	Estimated Total Losses (tpy)	(lb/yr)	Source of Emission Factor
VOC	8,760	21.32	93.40	186,791.96	Flash Gas Analysis; TANKS 4.0.9D
HAPs	8,760	0.83	3.66	7,310.97	Flash Gas Analysis; TANKS 4.0.9D
Benzene	8,760	0.0409	0.18	358.06	Flash Gas Analysis; TANKS 4.0.9D
Toluene	8,760	0.0357	0.16	312.71	Flash Gas Analysis; TANKS 4.0.9D
Ethlybenzene	8,760	0.0024	0.01	21.06	Flash Gas Analysis; TANKS 4.0.9D
Xylene	8,760	0.0107	0.05	93.59	Flash Gas Analysis; TANKS 4.0.9D
N-Hexane	8,760	0.7449	3.26	6,525.55	Flash Gas Analysis; TANKS 4.0.9D
Methane	8,760	3.6217	15.86	31,725.65	Flash Gas Analysis; TANKS 4.0.9D
Carbon dioxide	8,760	0.1939	0.85	1,698.99	Flash Gas Analysis; TANKS 4.0.9D
Nitrous oxide	8,760	0.0000	0.00	0.00	Flash Gas Analysis; TANKS 4.0.9D

**Emissions Controlled (by flare with 95% control efficiency)**

Pollutant	Hrs of Operation (hrs/yr)	Estimated Flash/Working/Breathing Losses (lb/hr)	(tpy)	(lb/yr)	Source of Emission Factor
VOC	8,760	1.07	4.670	9339.6	Lab Measurement & TANKS 4.0.9D
HAPs	8,760	0.04	0.183	365.5	Lab Measurement & TANKS 4.0.9D

Crescent Point Energy U.S. Corp  
Ute Tribal 1-21-3-2E  
Combustor Detail Sheet - Storage Tanks

Source Description:	COMBUSTOR(S)	Max. Oil Production	750 bbl/day
		Hydrocarbon Oil Tank Vapors Recovered and Sent to Combustor	6.78 Mscf/day
Maximum Combustor Rating:	11.7 MMBtu/hr	Maximum Combustor Rating	11.70 MMBtu/hr
		Maximum Combustor Potential Fuel Usage:	39.79 MMscf/yr
		Maximum Daily Oil Flash Gas Production	0.0068 MMscf/day
		Potential Fuel Usage (Oil Flash Gas)	2.47 MMscf/yr
Sale Gas Fuel Heating Value:	1,153 Btu/scf	Control Efficiency	95.00%
Flashed Gas Fuel Heating Value:	2,193 Btu/scf	Pilot Gas Usage	0.15 MMscf/yr
Pilot Light Heat Input Rating:	0.04 MMBtu/hr	Total Potential Fuel Usage	2.62 MMscf/yr

Potential Emissions from Oil Flash Gas Flared Daily

Pollutant	Emission Factor lb/MMBtu	Hrs of Operation (hrs/yr)	Estimated Emissions (lb/hr)	Estimated Emissions (tpy)	Estimated Emissions (lb/yr)	Source of Emission Factors
TOC	0.14	8,760	0.087	0.38	759.11	AP-42 Table 13.5-1
NOx	0.068	8,760	0.042	0.18	368.71	AP-42 Table 13.5-1
CO	0.31	8,760	0.192	0.84	1680.88	AP-42 Table 13.5-2

Potential Emissions from Flare Pilot Light

Pollutant	Emission Factor lb/MMBtu	Hrs of Operation (hrs/yr)	Estimated Emissions (lb/hr)	Estimated Emissions (tpy)	Estimated Emissions (lb/yr)	Source of Emission Factors
TOC	0.14	8,760	0.003	0.01	24.22	AP-42 Table 13.5-1
NOx	0.068	8,760	0.001	0.01	11.76	AP-42 Table 13.5-1
CO	0.31	8,760	0.006	0.03	53.63	AP-42 Table 13.5-2

Note: The actual make and model of the combustor(s) is dependent upon actual production and corresponding emissions, as per NSPS Supart OOOOa. The make and model depicted represents the anticipated maximum MMBtu/hr rating.

**Crescent Point Energy U.S. Corp**  
**Ute Tribal 1-21-3-2E**  
**Loadout Emissions Detail Sheet**

Source ID Number	OL	Potential operation	2105.8 hr/yr
Source Description	Truck Loading	Max. Daily rate of bbl	750.0 bbl
Source Usage	Oil Loadout		

*Potential Emissions*

5.84	tpy VOC	31.97	lb/day VOC
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*Estimated Fugitive Emissions*

(See AP-42 Section 5.2)

Molecular Weight of Vapors, MW	39.12 lb/lb-mol	From facility oil sample analysis
True Vapor Pressure, Pva @ T	2.10 psia	at T=145 for RVP 0.25
Crude Oil Temperature	145 F	Heated temperature of storage tanks
	605 R	
Saturation Factor	0.6	Dedicated service, submerged loading. AP-42, Table 5.2-1.
Annual throughput, v	11,498 1000 gallons of Condensed Hydrocarbon Liquid	
Loading losses, L @ tank	1.02 lb/1000 gallons	Emission Factor and equation from AP-42, Chapter 5.2.
L = 12.46 S P MW / T (1-eff)		
Annual losses @ tank, L*v	11,670.74 lb/yr	
Loading Rate	5,460 gallons/hr	One 130-bbl truck loaded in one hour.
Annual Hrs of Operation	2105.8 hr/yr	
Hourly VOC During Loading	5.54 lb/hr	
Annual VOC tpy during loading	5.84 tons/yr	
		Ratio of HAPs to VOC Emissions
Annual HAPs tpy during loading	0.228 tons/yr	3.9140%
Annual Benzene tpy during loading	0.011 tons/yr	0.1917%
Annual Toluene tpy during loading	0.010 tons/yr	0.1674%
Annual Ethylbenzene tpy during loading	0.001 tons/yr	0.0113%
Annual Xylene tpy during loading	0.003 tons/yr	0.0501%
Annual n-Hexane tpy during loading	0.204 tons/yr	3.4935%
Annual Methane (CH4) tpy during loading	0.991 tons/yr	16.9845%
Annual Carbon Dioxide (CO2) tpy during loading	0.053 tons/yr	0.9096%

**Crescent Point Energy U.S. Corp**  
**Ute Tribal 1-21-3-2E**  
**Natural Gas Burner Detail Sheet**

Equipment ID	HT-1		
Source Description	Heater Treater(s)	Potential operation	8760 hr/yr
Equipment Usage	Total of 1.25 MMBtu/hr	Potential fuel usage	9 MMscf/yr
			1,084 scf/hr
Fuel Type	Field Gas	1 Metric Ton	2204.62 pounds
Net Fuel Heating Value	1,153 Btu/scf	1 Kilogram	2.20462 pounds
		Fuel Heating Value-Producing	1153.4 Btu/scf
Heat Input	1.25 MMBtu/hr	Exit Temperature	400 deg F
Permit Status		Volume Flow Rate	180 ft³/min
Burner Efficiency	80 %		

***Potential Emissions***

Pollutant	Emission Factor (lb/MMscf)	Nominal Rating (MMBtu/hr)	Hrs of Operation (hrs/yr)	Estimated Emissions		Source of Emission Factor
				(lb/hr)	(tpy)	
NOx	100.00	1.25	8,760	0.14	0.59	AP-42 Table 1.4-1
CO	84.00	1.25	8,760	0.11	0.50	AP-42 Table 1.4-1
TOC	11.00	1.25	8,760	0.01	0.07	AP-42 Table 1.4-2
VOC	5.50	1.25	8,760	0.01	0.03	AP-42 Table 1.4-2
SO <sub>2</sub>	0.00	1.25	8,760	0.00	0.00	Gas Analysis
PM/PM <sub>10</sub> /PM <sub>2.5</sub>	7.60	1.25	8,760	0.01	0.05	AP-42 Table 1.4-2
HAPs	NA	1.25	8,760	0.00	0.01	Summary of HAPs
Benzene	2.10E-03	1.25	8,760	0.00	0.00	AP-42 Table 1.4-3
Toluene	3.40E-03	1.25	8,760	0.00	0.00	AP-42 Table 1.4-3
n-Hexane	1.80E+00	1.25	8,760	0.00	0.01	AP-42 Table 1.4-3
Formaldehyde	7.50E-02	1.25	8,760	0.00	0.00	AP-42 Table 1.4-3

Pollutant	Emission Factor (kg CO <sub>2</sub> /MMBtu)	Nominal Rating (MMBtu/hr)	Hrs of Operation (hrs/yr)	Estimated Emissions		Source of Emission Factor
				(lb/hr)	metric tons per year (MTPY)	
CH <sub>4</sub>	1.00E-03	1.25	8,760	0.00	0.01	Title 40, Part 98, Subpart C, Table C-2
CO <sub>2</sub>	53.06	1.25	8,760	146.22	581.01	Title 40, Part 98, Subpart C, Table C-1
N <sub>2</sub> O	1.00E-04	1.25	8,760	0.00	0.00	Title 40, Part 98, Subpart C, Table C-2

Natural gas burner emissions for criteria pollutants can be estimated using the following equation:

$$E_X = \frac{EF_X \times BR \times 10^6 \times HO}{\frac{B_{EFF}}{100} \times HV_{Avg} \times 10^6 \times 2000} \times \frac{HV_{Prod}}{HV_{Avg}} \times \left( \frac{(100 - DRE)}{100} \right)$$

where:

EX = emissions for pollutant X (tpy);

EFX = emission factor for pollutant X (lb/MMscf);

BR = burner rating (MMBtu/hr);

BEff = burner efficiency (%);

HO = annual hours of operation (hr/yr);

HVAvg = average gas heating value (Btu/scf);

HVProd = produced gas heating value (Btu/scf);

DRE = destruction and removal efficiency (%);

1-ton = 2000-lb;

1-MMBtu = 106-Btu; and

1-MMscf = 106-scf.

Natural gas burner emissions for GHG pollutants can be estimated using the following equation:

$$CO_2 = 1 \times 10^{-3} \times \text{Fuel Consumption} \times \text{Heating Value} \times \text{Emission Factor}$$

where:

CO<sub>2</sub> = Annual CO<sub>2</sub> mass emissions for natural gas combustion

Fuel Consumption = Annual fuel consumption in MMscf per year.

Heating Value = Heating value of natural gas in Btu per scf.

Emission Factor = in kilograms (kg) CO<sub>2</sub> per MMBtu.



**Crescent Point Energy U.S. Corp**  
**Ute Tribal 1-21-3-2E**  
**Natural Gas Burners Detail Sheet**

Equipment ID	HEATERS	Potential operation	8,760
Source Description	Tank Heaters	Potential fuel usage	23 MMscf/yr
Equipment Usage	Total of 3 MMBtu/hr		2,601 scf/hr
Fuel Type	Field Gas	1 Metric Ton	2,205 pounds
Net Fuel Heating Value	1,153 Btu/scf	1 Kilogram	2 pounds
		Fuel Heating Value-Producing	1,153 Btu/scf
Heat Input	3.000 MMBtu/hr	Exit Temperature	400 deg F
		Volume Flow Rate	180 ft³/min
Burner Efficiency	80 %	Destruction Efficiency	

***Potential Emissions***

Pollutant	Emission Factor (lb/MMscf)	Nominal Rating (MMBtu/hr)	Hrs of Operation (hrs/yr)	Estimated Emissions		Source of Emission Factor
				(lb/hr)	(tpy)	
NOx	100.00	3.00	8,760	0.33	1.42	AP-42 Table 1.4-1
CO	84.00	3.00	8,760	0.27	1.20	AP-42 Table 1.4-1
TOC	11.00	3.00	8,760	0.04	0.16	AP-42 Table 1.4-2
VOC	5.50	3.00	8,760	0.02	0.08	AP-42 Table 1.4-2
SO <sub>2</sub>	0.00	3.00	8,760	0.00	0.00	Gas Analysis
PM/PM <sub>10</sub> /PM <sub>2.5</sub>	7.60	3.00	8,760	0.02	0.11	AP-42 Table 1.4-2
HAPs	NA	3.00	8,760	0.01	0.03	Summary of HAPs
Benzene	2.10E-03	3.00	8,760	0.00	0.00	AP-42 Table 1.4-3
Toluene	3.40E-03	3.00	8,760	0.00	0.00	AP-42 Table 1.4-3
n-Hexane	1.80E+00	3.00	8,760	0.01	0.03	AP-42 Table 1.4-3
Formaldehyde	7.50E-02	3.00	8,760	0.00	0.00	AP-42 Table 1.4-3

Pollutant	Emission Factor (kg CO <sub>2</sub> /MMBtu)	Nominal Rating (MMBtu/hr)	Hrs of Operation (hrs/yr)	Estimated Emissions		Source of Emission Factor
				(lb/hr)	metric tons per year (MTPY)	
CH <sub>4</sub>	1.00E-03	3.00	8,760	0.01	0.03	Title 40, Part 98, Subpart C, Table C-2
CO <sub>2</sub>	53.06	3.00	8,760	350.93	1,394.42	Title 40, Part 98, Subpart C, Table C-1
N <sub>2</sub> O	1.00E-04	3.00	8,760	0.00	0.00	Title 40, Part 98, Subpart C, Table C-2

Natural gas burner emissions for criteria pollutants can be estimated using the following equation:

$$E_X = \frac{EF_X \times BR \times 10^6 \times HO}{\frac{B_{EFF}}{100} \times HV_{Avg} \times 10^6 \times 2000} \times \frac{HV_{Prod}}{HV_{Avg}} \times \left( \frac{100 - DRE}{100} \right)$$

where:

EX = emissions for pollutant X (tpy);

EFX = emission factor for pollutant X (lb/MMscf);

BR = burner rating (MMBtu/hr);

BEff = burner efficiency (%);

HO = annual hours of operation (hr/yr);

HVAvg = average gas heating value (Btu/scf);

HVProd = produced gas heating value (Btu/scf);

DRE = destruction and removal efficiency (%);

1-ton = 2000-lb;

1-MMBtu = 106-Btu; and

1-MMscf = 106-scf.

Natural gas burner emissions for GHG pollutants can be estimated using the following equation:

$$CO_2 = 1 \times 10^{-3} \times \text{Fuel Consumption} \times \text{Heating Value} \times \text{Emission Factor}$$

where:

CO<sub>2</sub> = Annual CO<sub>2</sub> mass emissions for natural gas combustion

Fuel Consumption = Annual fuel consumption in MMscf per year.

Heating Value = Heating value of natural gas in Btu per scf.

Emission Factor = in kilograms (kg) CO<sub>2</sub> per MMBtu.

Crescent Point Energy U.S. Corp  
Ute Tribal 1-21-3-2E - Engine 1 (E-1)  
**Pumpjack Engine Detail Sheet - Uncontrolled**

<b>Engine Build Year:</b>	Post 1/1/2011	<b>Rebuild Year:</b>	Not applicable
<b>Engine Make &amp; Model:</b>	Doosan D14.6L	<b>Engine Type:</b>	4-Stroke Rich Burn
<b>Total Horsepower:</b>	449	<b>Heat Rating:</b>	3.209 MMBtu/hr

Given		
Fuel Usage	66.77	MCFD
Fuel Usage	24.37	MMCF/YR
NOx Emission Factor	1.00	g/hp-hr
CO Emission Factor	2.00	g/hp-hr
Total PM Emission Factor	9.91E-03	lb/MMBtu
Total PM <sub>10</sub> /PM <sub>2.5</sub> Emission Factor	9.50E-03	lb/MMBtu
VOC Emission Factor	3.58E-01	lb/MMBtu
Sulfur Emission Factor	0	lb/MMBtu
Formaldehyde Emission Factor	2.05E-02	lb/MMBtu
Acetaldehyde Emission Factor	2.79E-03	lb/MMBtu
Acrolein Emission Factor	2.63E-03	lb/MMBtu
Benzene Emission Factor	1.58E-03	lb/MMBtu
Methanol Emission Factor	3.06E-03	lb/MMBtu
Methane (CH <sub>4</sub> ) Emission Factor	1.00E-03	kg CO <sub>2</sub> /MMBtu
Carbon Dioxide (CO <sub>2</sub> ) Emission Factor	53.06	kg CO <sub>2</sub> /MMBtu
Nitrous Oxide (N <sub>2</sub> O) Emission Factor	1.00E-04	kg CO <sub>2</sub> /MMBtu
Engine Rating	449	hp
% runtime in field	100%	
Produced Gas Heating Value (HHV)	1153	Btu/scf
Fuel Consumption Rate (Btu/hp-hr)	7,146	Btu/hp-hr
Conversion Factor	2204.62	lb/metric ton
Conversion Factor	1.10231	metric ton/std. ton
Conversion Factor	0.90718	std. ton/metric ton
Conversion Factor	24	hr/day
Conversion Factor	1000000	Btu/MMBtu
Conversion Factor	8760	hr/yr
Conversion Factor	2000	lb/std. ton
Conversion Factor	454	g/lb

40 CFR Part 60, Subpart JJJJ  
40 CFR Part 60, Subpart JJJJ  
AP-42 - Table 3.2-3 - 4-stroke rich-burn engines  
AP-42 - Table 3.2-3 - 4-stroke rich-burn engines  
AP-42 - Table 3.2-3 - 4-stroke rich-burn engines  
AP-42 - Table 3.2-3 - 4-stroke rich-burn engines  
No hydrogen sulfide indicated in gas analysis.  
AP-42 - Table 3.2-3 - 4-stroke rich-burn engines  
AP-42 - Table 3.2-3 - 4-stroke rich-burn engines  
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AP-42 - Table 3.2-3 - 4-stroke rich-burn engines  
40 CFR Part 98, Subpart C, Table C-2  
40 CFR Part 98, Subpart C, Table C-1  
40 CFR Part 98, Subpart C, Table C-2

Calculations		
Pollutant	Emissions (Uncontrolled)	
	lb/hr	tons/year
NOx	0.99	4.33
CO	1.98	8.66
VOC	1.15	5.03
PM	3.18E-02	1.39E-01
PM <sub>10</sub>	3.05E-02	1.34E-01
PM <sub>2.5</sub>	3.05E-02	1.34E-01
SO <sub>2</sub>	0.00E+00	0.00E+00
HAPs	9.81E-02	4.30E-01
Formaldehyde	6.58E-02	2.88E-01
Acetaldehyde	8.95E-03	3.92E-02
Acrolein	8.44E-03	3.70E-02
Benzene	5.07E-03	2.22E-02
Methanol	9.82E-03	4.30E-02
	lb/hr	metric tons/year
CH <sub>4</sub>	0.007	0.028
CO <sub>2</sub>	375.35	1491.45
N <sub>2</sub> O	0.00	0.00

**Equations**  
Pollutant Emission Rate = Emission Factor x Engine Rating x Conversion Factor  
PM/PM10/PM2.5 Emission Rate = Emission Factor x Fuel Usage x Fuel Heating Value x Conversion Factors

Crescent Point Energy U.S. Corp  
Ute Tribal 1-21-3-2E - Engine 1 (E-1)  
Pumpjack Engine Detail Sheet - Controlled

**Engine Build Year:** Post 1/1/2011 **Rebuild Year:** Not applicable  
**Engine Make & Model:** Doosan D14.6L **Engine Type:** 4-Stroke Rich Burn  
**Total Horsepower:** 449 **Heat Rating:** 3.209 MMBtu/hr

Given		
Fuel Usage	66.77	MCFD
Fuel Usage	24.37	MMCF/YR
NOx Emission Factor	1.00	g/hp-hr
CO Emission Factor	2.00	g/hp-hr
Total PM Emission Factor	9.91E-03	lb/MMBtu
Total PM <sub>10</sub> /PM <sub>2.5</sub> Emission Factor	9.50E-03	lb/MMBtu
VOC Emission Factor	7.00E-01	g/hp-hr
Sulfur Emission Factor	0	lb/MMBtu
Formaldehyde Emission Factor	1.03E-02	lb/MMBtu
Acetaldehyde Emission Factor	1.40E-03	lb/MMBtu
Acrolein Emission Factor	1.32E-03	lb/MMBtu
Benzene Emission Factor	7.90E-04	lb/MMBtu
Methanol Emission Factor	1.53E-03	lb/MMBtu
Methane (CH <sub>4</sub> ) Emission Factor	1.00E-03	kg CO <sub>2</sub> /MMBtu
Carbon Dioxide (CO <sub>2</sub> ) Emission Factor	53.06	kg CO <sub>2</sub> /MMBtu
Nitrous Oxide (N <sub>2</sub> O) Emission Factor	1.00E-04	kg CO <sub>2</sub> /MMBtu
Engine Rating	449	hp
% runtime in field	100%	
Produced Gas Heating Value (HHV)	1153	Btu/scf
Fuel Consumption Rate (Btu/hp-hr)	7,146	Btu/hp-hr
Conversion Factor	2204.62	lb/metric ton
Conversion Factor	1.10231	metric ton/std. ton
Conversion Factor	0.90718	std. ton/metric ton
Conversion Factor	24	hr/day
Conversion Factor	1000000	Btu/MMBtu
Conversion Factor	8760	hr/yr
Conversion Factor	2000	lb/std. ton
Conversion Factor	454	g/lb

40 CFR Part 60, Subpart JJJJ  
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AP-42 - Table 3.2-3 - 4-stroke rich-burn engines  
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40 CFR Part 60, Subpart JJJJ  
No hydrogen sulfide indicated in gas analysis.  
Catalyst Spec & AP-42 - Table 3.2-3 - 4-stroke rich-burn engines  
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40 CFR Part 98, Subpart C, Table C-2  
40 CFR Part 98, Subpart C, Table C-1  
40 CFR Part 98, Subpart C, Table C-2

Calculations

Pollutant	Emissions (Controlled)	
	lb/hr	tons/year
NOx	0.99	4.33
CO	1.98	8.66
VOC	6.92E-01	3.03E+00
PM	3.18E-02	1.39E-01
PM <sub>10</sub>	3.05E-02	1.34E-01
PM <sub>2.5</sub>	3.05E-02	1.34E-01
SO <sub>2</sub>	0.00E+00	0.00E+00
HAPs	4.90E-02	2.15E-01
Formaldehyde	3.29E-02	1.44E-01
Acetaldehyde	4.48E-03	1.96E-02
Acrolein	4.22E-03	1.85E-02
Benzene	2.53E-03	1.11E-02
Methanol	4.91E-03	2.15E-02
	lb/hr	metric tons/year
CH <sub>4</sub>	0.01	0.03
CO <sub>2</sub>	375.35	1491.45
N <sub>2</sub> O	0.00	0.00

Equations

Pollutant Emission Rate = Emission Factor x Engine Rating x Conversion Factor

PM/PM<sub>10</sub>/PM<sub>2.5</sub> Emission Rate = Emission Factor x Fuel Usage x Fuel Heating Value x Conversion Factors

**Crescent Point Energy U.S. Corp**  
**Ute Tribal 1-21-3-2E**  
**Fugitive VOC Detail Sheet**

Source ID Number	FUG	Source Location Zone	12
Source Description	Piping Fugitives Equipment Piping	Potential operation	8,760 hr/yr

*Potential Emissions*

Equipment Type	TOC Emission Factor (lb/hr/source)	Source Count	Hours of Operation	Control Factor (Percent)	Total HC Emission Rate (lb/hr)	Total HC Emission Rate (tpy)	Percent VOC	Total VOC Emission Rate (lb/hr)	Total VOC Emission Rate (tpy)
Valves-Gas/Vapor	0.009920	10	8,760	0.00%	0.10	0.43	10.64%	0.01	0.05
Valves-Light Oil	0.005510	14	8,760	0.00%	0.08	0.34	100.00%	0.08	0.34
Valves-Heavy Oil	0.000019	0	8,760	0.00%	0.00	0.00		0.00	0.00
Valves-Water	0.000216	14	8,760	0.00%	0.00	0.01	50.00%	0.00	0.01
Relief Valves	0.019400	0	8,760	0.00%	0.00	0.00	10.64%	0.00	0.00
Pump Seals-Gas/Vapor	0.019400	4	8,760	0.00%	0.08	0.34	10.64%	0.01	0.04
Pump Seals-Light Oil	0.028700	0	8,760	0.00%	0.00	0.00	100.00%	0.00	0.00
Pump Seals-Heavy Oil	0.000071	0	8,760	0.00%	0.00	0.00		0.00	0.00
Sample Connections	0.019400	0	8,760	0.00%	0.00	0.00	100.00%	0.00	0.00
Open-Ended Lines	0.004410	0	8,760	0.00%	0.00	0.00		0.00	0.00
Other - Hatch, Gas/Vapor	0.019467	2	8,760	0.00%	0.04	0.17	10.64%	0.00	0.02
Other - Hatch, Light Oil	0.016535	2	8,760	0.00%	0.03	0.14	100.00%	0.03	0.14
Other - Hatch, Heavy Oil	0.000071	0	8,760	0.00%	0.00	0.00		0.00	0.00
Other - Hatch, Water	0.030865	2	8,760	0.00%	0.06	0.27	50.00%	0.03	0.14
Connectors - Gas/Vapors	0.000440	14	8,760	0.00%	0.01	0.03	10.64%	0.00	0.00
Connectors - Light Oil	0.000463	22	8,760	0.00%	0.01	0.04	100.00%	0.01	0.04
Connectors - Heavy Oil	0.000017	0	8,760	0.00%	0.00	0.00		0.00	0.00
Connectors - Water	0.000243	22	8,760	0.00%	0.01	0.02	50.00%	0.00	0.01
Flanges-Gas/Vapor	0.000860	16	8,760	0.00%	0.01	0.06	10.64%	0.00	0.01
Flanges-Heavy Oil	0.000001	0	8,760	0.00%	0.00	0.00		0.00	0.00
Flanges-Light Oil	0.000243	24	8,760	0.00%	0.01	0.03	100.00%	0.01	0.03
Flanges-Water	0.000006	24	8,760	0.00%	0.00	0.00	50.00%	0.00	0.00
<b>Totals</b>		<b>170</b>			<b>0.43</b>	<b>1.89</b>		<b>0.19</b>	<b>0.82</b>

Oil and gas production operations equipment leak emission factors (from OAQPS TTN BBS)

Source counts estimated from 40 CFR Part 98, Subpart W, Table W-1C and are not site-specific.

VOC and HAP fugitive emissions can be estimated using the following equation:

$$E_X = \frac{[(EF_{C1} \times \#_{C1}) + (EF_{C2} \times \#_{C2}) + \dots (EF_{Cn} \times \#_{Cn})] \times 8760}{2000} \times WFX$$

where:

EX = emissions for pollutant X (tpy);

EFC1, EFC2 ...EFCn = emission factor for component C1, C2, ...Cn (lb/hr/component);

#C1, #C2 ...#Cn = number of C1, C2, ...Cn components;

WFX = weight fraction of pollutant X (wt W/wt TOC);

1-year = 8760-hr; and

1-ton = 2000-lb.

**Crescent Point Energy U.S. Corp**  
**Ute Tribal 1-21-3-2E**  
**Fugitive HAP Detail Sheet**

Source ID Number	FUG	Potential operation	8,760 hr/yr
Source Description	Piping Fugitives		

*Potential Emissions*

Equipment Type	Total Emission Rate (lb/hr)	Total Emission Rate (tpy)
All-Gas/Vapor	0.03	0.11
All-Light Liquids	0.13	0.55
All-Heavy Oil	0.00	0.00
All-Water	0.04	0.15
<b>Total VOC Emissions</b>	<b>0.19</b>	<b>0.82</b>
<b>TOC Emissions</b>	<b>0.43</b>	<b>1.89</b>

*Potential Emissions*

Equipment Type	Emission Factor		Total Emission	Total Emission
	Gas	Light Oil	Rate (lb/hr)	Rate (tpy)
	Weight Percent (%wt)			
Benzene	0.023%	0.1383%	0.000	0.00132
Toluene	0.026%	0.121%	0.000	0.00120
Ethylbenzene	0.003%	0.008%	0.000	0.00009
Xylene	0.013%	0.036%	0.000	0.00040
N-Hexane	0.400%	2.521%	0.005	0.02385
Methane (CH <sub>4</sub> )	58.680%	12.420%	0.307	1.34570
Carbon dioxide (CO <sub>2</sub> )	0.956%	0.665%	0.000	0.00000
Nitrous oxide (N <sub>2</sub> O)	n/a	n/a	n/a	n/a
<b>HAP Totals</b>	<b>0.47%</b>	<b>2.82%</b>	<b>0.006</b>	<b>0.027</b>

**Equipment list, including control devices, etc.**

<b>Description</b>	<b>Unique ID</b>
Crude Oil Storage Tanks - TK1 - TK3	TK1 - TK3
Produced Water Tank(s)	PWTK1 - PWTK3
Heater/Treater(s)	HTTR(S)
Tank Heaters	TK HTR(S)
Oil Tank Truck Loading	OL
Combustor(s)	COMBUSTOR(S)
Fugitive Emissions	FUG
Methanol Tank - 55-gallon drum	MT
Glycol Tank - 55-gallon drum	GT
Engine 1 (E-1)	E-1

**Type of fuel and amount used**

Fuel Usage	
Pilot Light(s) Usage:	0.15 MMscf/year
Engine(s) Usage:	24.37 MMscf/year
Heater(s) Usage:	32.28 MMscf/year

**Type Raw Materials Used**

Flash gas from all storage tanks routed to the flare.  
Oil and produced water moved offsite via trucks.  
Natural gas used in heaters, flared pilot light(s), and engines(s).

**Production Rate**

273,750 barrels per year of oil  
91.25 MMscf/year gas production (used onsite or routed to sales gas line)

**Operating Schedule**

24 hours per day, 7 days per week, 52 weeks per year



**ATTACHMENT D**  
**TANKS 4.0.9D EMISSION CALCULATION RESULTS**



main / 720.880.3610  
fax / 303.292.1562  
toll free / 1.888.093.0020  
555 17th Street, Suite 1800  
Denver, Colorado  
USA 80202

January 9, 2018

Mr. Jay Morris  
Utah Department of Environmental Quality  
Division of Air Quality  
195 North 1950 West  
Salt Lake City, UT 84116

**RE: CRESCENT POINT ENERGY U.S. CORP  
ANNUAL REPORT 40 CFR PART 60, SUBPART OOOO  
CENTRIFUGAL COMPRESSOR AFFECTED FACILITY**

Mr. Morris:

Please find the annual report for United States Environmental Protection Agency (EPA) 40 Code of Federal Regulations (CFR) Part 60, Subpart OOOO (Subpart OOOO) affected centrifugal compressor affected facility owned and operated by Crescent Point Energy U.S. Corp (Crescent Point), located in Utah. This report is submitted as required by §60.5420.

If you have any questions or need additional information, please do not hesitate to contact me at (303) 308-6285 or by email [jmcqueen@crescentpointenergy.com](mailto:jmcqueen@crescentpointenergy.com).

Sincerely,

Jennifer McQueen  
Air Quality Specialist  
Crescent Point Energy U.S. Corp

Attachments: Annual Report 40 CFR Part 60, Subpart OOOO,  
Centrifugal Compressor Affected Facility, Utah

**TANKS 4.0.9d**  
**Emissions Report - Detail Format**  
**Tank Identification and Physical Characteristics**

**Identification**

User Identification:	Crescent Point - Glycol tank
City:	Vernal
State:	Utah
Company:	Crescent Point
Type of Tank:	Horizontal Tank
Description:	55-gal drum Used smallest dimensions possible.

**Tank Dimensions**

Shell Length (ft):	5.00
Diameter (ft):	3.00
Volume (gallons):	265.00
Turnovers:	1.00
Net Throughput(gal/yr):	265.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

**Paint Characteristics**

Shell Color/Shade:	Gray/Light
Shell Condition	Good

**Breather Vent Settings**

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meterological Data used in Emissions Calculations: Salt Lake City, Utah (Avg Atmospheric Pressure = 12.64 psia)

**TANKS 4.0.9d**  
**Emissions Report - Detail Format**  
**Liquid Contents of Storage Tank**

**Crescent Point - Glycol tank - Horizontal Tank**  
**Vernal, Utah**

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Propylene glycol	All	59.41	49.72	69.11	54.20	0.0009	0.0005	0.0015	76.1100			76.11	Option 2: A=6.2062, B=2085.9, C=203.54

# TANKS 4.0.9d

## Emissions Report - Detail Format

### Detail Calculations (AP-42)

#### Crescent Point - Glycol tank - Horizontal Tank Vernal, Utah

##### Annual Emission Calculations

Standing Losses (lb):	0.0072
Vapor Space Volume (cu ft):	22.5114
Vapor Density (lb/cu ft):	0.0000
Vapor Space Expansion Factor:	0.0700
Vented Vapor Saturation Factor:	0.9999
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	22.5114
Tank Diameter (ft):	3.0000
Effective Diameter (ft):	4.3713
Vapor Space Outage (ft):	1.5000
Tank Shell Length (ft):	5.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0000
Vapor Molecular Weight (lb/lb-mole):	76.1100
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	0.0009
Daily Avg. Liquid Surface Temp. (deg. R):	519.0816
Daily Average Ambient Temp. (deg. F):	51.9825
Ideal Gas Constant R	
(psia cu ft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	513.6725
Tank Paint Solar Absorptance (Shell):	0.5400
Daily Total Solar Insulation	
Factor (Btu/sqft day):	1,452.1184
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0700
Daily Vapor Temperature Range (deg. R):	38.7740
Daily Vapor Pressure Range (psia):	0.0010
Breather Vent Press. Setting Range (psia):	0.0600
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	0.0009
Vapor Pressure at Daily Minimum Liquid	
Surface Temperature (psia):	0.0005
Vapor Pressure at Daily Maximum Liquid	
Surface Temperature (psia):	0.0015
Daily Avg. Liquid Surface Temp. (deg R):	519.0816
Daily Min. Liquid Surface Temp. (deg R):	509.3861
Daily Max. Liquid Surface Temp. (deg R):	528.7751
Daily Ambient Temp. Range (deg. R):	23.3583
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9999
Vapor Pressure at Daily Average Liquid:	
Surface Temperature (psia):	0.0009
Vapor Space Outage (ft):	1.5000
Working Losses (lb):	0.0004
Vapor Molecular Weight (lb/lb-mole):	76.1100
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	0.0009
Annual Net Throughput (gal/yr.):	265.0000

TANKS 4.0 Report

Annual Turnovers:	1.0000
Turnover Factor:	1.0000
Tank Diameter (ft):	3.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	0.0076

**TANKS 4.0.9d**  
**Emissions Report - Detail Format**  
**Individual Tank Emission Totals**

**Emissions Report for: Annual**

**Crescent Point - Glycol tank - Horizontal Tank**  
**Vernal, Utah**

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Propylene glycol	0.00	0.01	0.01

**TANKS 4.0.9d**  
**Emissions Report - Detail Format**  
**Tank Identification and Physical Characteristics**

**Identification**

User Identification:	Crescent Point - Methanol tank
City:	Vernal
State:	Utah
Company:	Crescent Point
Type of Tank:	Horizontal Tank
Description:	55-gallon drum size methanol Used smallest dimensions possible. Horizontal tank

**Tank Dimensions**

Shell Length (ft):	5.00
Diameter (ft):	3.00
Volume (gallons):	265.00
Turnovers:	1.00
Net Throughput(gal/yr):	265.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

**Paint Characteristics**

Shell Color/Shade:	Gray/Light
Shell Condition	Good

**Breather Vent Settings**

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meteorological Data used in Emissions Calculations: Salt Lake City, Utah (Avg Atmospheric Pressure = 12.64 psia)



TANKS 4.0.9d  
Emissions Report - Detail Format  
Liquid Contents of Storage Tank

Crescent Point - Methanol tank - Horizontal Tank  
Vernal, Utah

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Methyl alcohol	All	59.41	49.72	69.11	54.20	1.4156	1.0351	1.9099	32.0400			32.04	Option 2: A=7.897, B=1474.08, C=229.13

# TANKS 4.0.9d

## Emissions Report - Detail Format

### Detail Calculations (AP-42)

#### Crescent Point - Methanol tank - Horizontal Tank Vernal, Utah

##### Annual Emission Calculations

Standing Losses (lb):	8.8559
Vapor Space Volume (cu ft):	22.5114
Vapor Density (lb/cu ft):	0.0081
Vapor Space Expansion Factor:	0.1473
Vented Vapor Saturation Factor:	0.8988
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	22.5114
Tank Diameter (ft):	3.0000
Effective Diameter (ft):	4.3713
Vapor Space Outage (ft):	1.5000
Tank Shell Length (ft):	5.0000
Vapor Density	
Vapor Density (lb/cu ft):	0.0081
Vapor Molecular Weight (lb/lb-mole):	32.0400
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	1.4156
Daily Avg. Liquid Surface Temp. (deg. R):	519.0816
Daily Average Ambient Temp. (deg. F):	51.9825
Ideal Gas Constant R	
(psia cu ft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R):	513.8725
Tank Paint Solar Absorptance (Shell):	0.5400
Daily Total Solar Insulation	
Factor (Btu/sqft day):	1,452.1184
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.1473
Daily Vapor Temperature Range (deg. R):	38.7740
Daily Vapor Pressure Range (psia):	0.8748
Breather Vent Press. Setting Range (psia):	0.0600
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	1.4156
Vapor Pressure at Daily Minimum Liquid	
Surface Temperature (psia):	1.0351
Vapor Pressure at Daily Maximum Liquid	
Surface Temperature (psia):	1.9099
Daily Avg. Liquid Surface Temp. (deg R):	519.0816
Daily Min. Liquid Surface Temp. (deg R):	509.3861
Daily Max. Liquid Surface Temp. (deg R):	528.7751
Daily Ambient Temp. Range (deg. R):	23.3583
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.8988
Vapor Pressure at Daily Average Liquid:	
Surface Temperature (psia):	1.4156
Vapor Space Outage (ft):	1.5000
Working Losses (lb):	0.2862
Vapor Molecular Weight (lb/lb-mole):	32.0400
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	1.4156
Annual Net Throughput (gal/yr.):	265.0000

TANKS 4.0 Report

Annual Turnovers:	1.0000
Turnover Factor:	1.0000
Tank Diameter (ft):	3.0000
Working Loss Product Factor:	1.0000
Total Losses (lb):	9.1421

**TANKS 4.0.9d**  
**Emissions Report - Detail Format**  
**Individual Tank Emission Totals**

**Emissions Report for: Annual**

**Crescent Point - Methanol tank - Horizontal Tank**  
**Vernal, Utah**

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Methyl alcohol	0.29	8.86	9.14

**ATTACHMENT E**  
**EQUIPMENT SPECIFICATIONS**



Revised: March 15, 2010

**NGEngines, Inc.**  
1455 Michael Drive  
Wood Dale, IL 60191  
630-281-7107  
[www.ngengine.com](http://www.ngengine.com)

### Zero-Hour Non-Deteriorated Emissions for Permitting Customers

GRAMS PER KW-HR		D081NA		D081L <sup>5&amp;6</sup>		D111L <sup>5</sup>		D146L <sup>5</sup>		D183L <sup>5&amp;6</sup>		D219L <sup>5</sup>	
EPA Engine Family	Model/Fuel	8.1NA LPG	8.1NA NG	8.1LT LPG	8.1LT NG	11L LPG	11L NG	14.6L LPG	14.6L NG	18.3L LPG	18.3L NG	22L LPG	22L NG
Displacement (Liter)		8.071L		8.071L		11.051L		14.618L		18.273L		21.927L	
Rated Power (kW) @ 2000 RPM <sup>1,2&amp;3</sup>				136	176	155	224	238	335	317	422	352	485
		g/KW-hr	g/KW-hr	g/KW-hr	g/KW-hr	g/KW-hr	g/KW-hr	g/KW-hr	g/KW-hr	g/KW-hr	g/KW-hr	g/KW-hr	g/KW-hr
BSCO				0.53	0.18	0.33	0.35	0.15	0.08	0.24	0.28	0.34	0.13
BSTHC				0.09	0.85	0.09	2.98	0.06	0.20	0.10	0.75	0.05	0.43
BSNMHC <sup>7</sup>				NA	0.02	NA	0.34	NA	0.06	NA	0.01	NA	0.01
BSNOx				0.01	0.01	0.02	0.03	0.04	0.10	0.03	0.04	0.03	0.08
BSTHC+Nox				0.11	0.85	0.11	NA	0.10	NA	0.13	NA	0.08	NA
BSNMHC+Nox				NA	0.03	NA	0.37	NA	0.16	NA	0.04	NA	0.09
BSFC (g/kw-hr) <sup>4</sup>				0.27	0.25	0.30	0.26	0.32	0.24	0.24	0.22	0.27	0.22

GRAMS PER HP-HR		D081NA		D081L <sup>5&amp;6</sup>		D111L <sup>5</sup>		D146L <sup>5</sup>		D183L <sup>5&amp;6</sup>		D219L <sup>5</sup>	
EPA Engine Family	Model/Fuel	8.1NA LPG	8.1NA NG	8.1LT LPG	8.1LT NG	11L LPG	11L NG	14.6L LPG	14.6L NG	18.3L LPG	18.3L NG	22L LPG	22L NG
Displacement (Cubic Inch)		492.5CID		492.5CID		674.5CID		892.1CID		1115.1CID		1338.0CID	
Rated Power (hp) @ 2000 RPM <sup>1,2&amp;3</sup>				183	236	208	301	319	449	425	566	472	650
		g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr	g/hp-hr
BSCO		-	-	0.39	0.13	0.25	0.26	0.11	0.06	0.18	0.21	0.25	0.10
BSTHC		-	-	0.07	0.63	0.07	2.22	0.04	0.15	0.07	0.56	0.04	0.32
BSNMHC <sup>7</sup>		NA	-	NA	0.02	NA	0.25	NA	0.04	NA	0.01	NA	0.00
BSNOx		-	-	0.01	0.00	0.01	0.02	0.03	0.07	0.02	0.03	0.02	0.06
BSTHC+Nox		-	NA	0.08	NA	0.08	NA	0.07	NA	0.10	NA	0.06	NA
BSNMHC+Nox		NA	-	NA	0.02	NA	0.28	NA	0.12	NA	0.03	NA	0.06
BSFC (g/hp-hr) <sup>4</sup>		-	-	0.20	0.19	0.22	0.19	0.24	0.18	0.18	0.16	0.20	0.16

#### NOTES

<sup>1</sup> Rated power is based on ISO3046 and/or ISO 8528.

<sup>2</sup> All ratings are gross flywheel horsepower corrected to 77°F at an altitude of 328 feet with no cooling fan or alternator losses using heating value for NG of 1015 BTU/SCF.

<sup>3</sup> Production tolerances in engines and installed components can account for power variations of +/- 5%. Altitude, temperature and excessive exhaust and intake restrictions should be applied to power calculations.

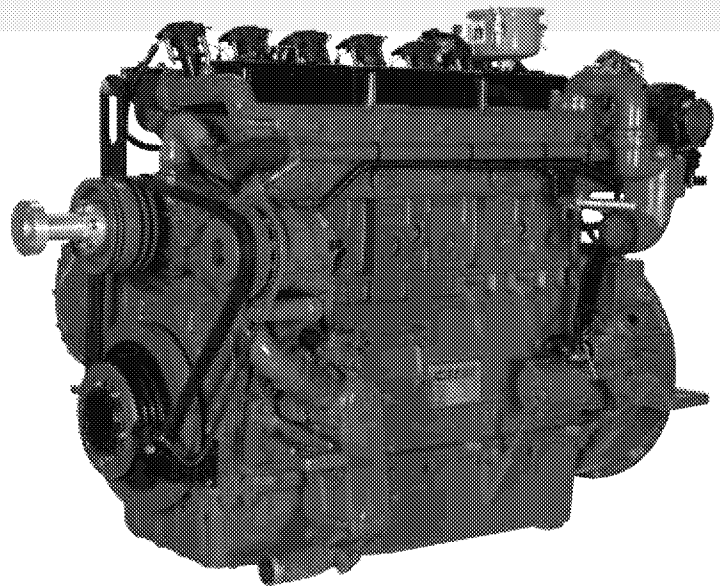
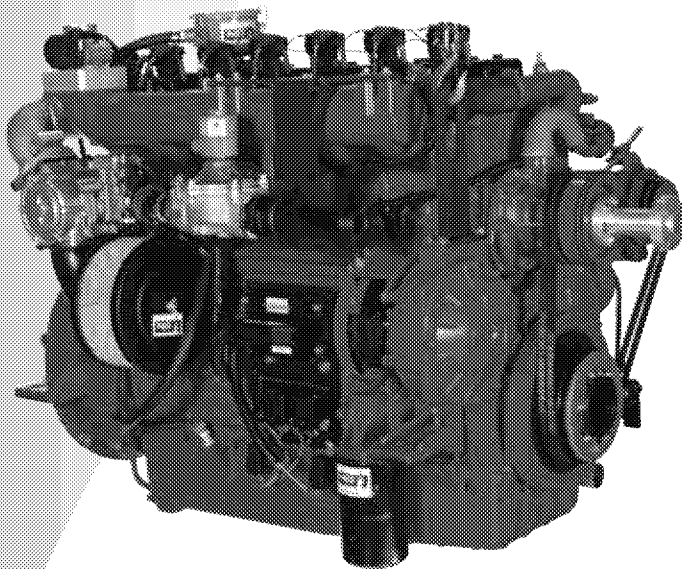
<sup>4</sup> Bsfcc is based on 100% gross flywheel power rating and does not include fan or generator losses.

<sup>5</sup> Emissions shown are certified third-party Zero-hour data points suitable for site permitting calculations and are measured in accordance with US EPA NSPS 40CFR Part 1048

<sup>6</sup> Emissions shown are certified third-party Zero-hour data points suitable for site permitting calculations and are measured in accordance with US EPA NSPS 40CFR Part 60

<sup>7</sup> For NG, NMHC is reported in place of VOC for this report

# 8.1L NG ENGINE



## FEATURES / OPTIONS

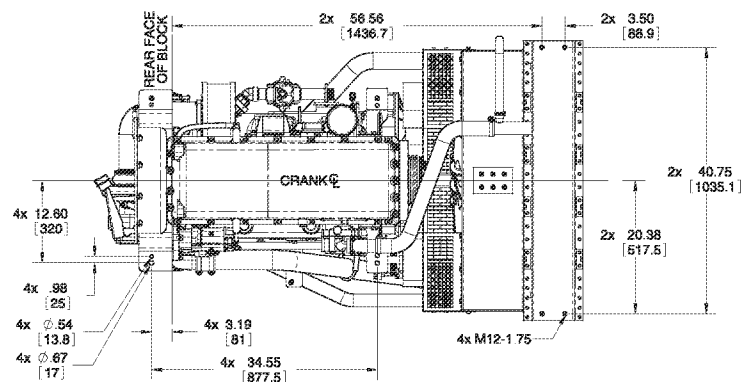
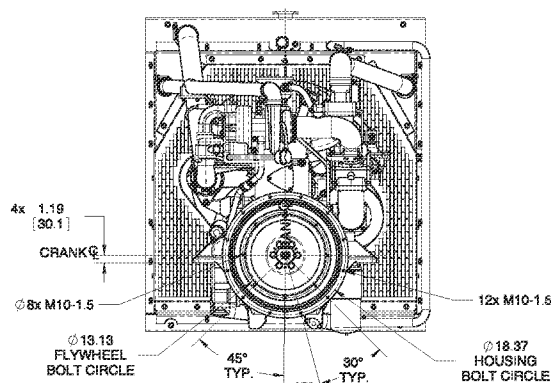
- US –EPA Certified and CARB Compliant
- Power: 178kWm Standby on NG
- Integrated Engine Controls Protection with CANBUS
- 50c Ambient Cooling Capacity
- UL2200 Compliant or Listed Components
- MasterTrak Telematics service (included for 1 year)

## DESCRIPTION

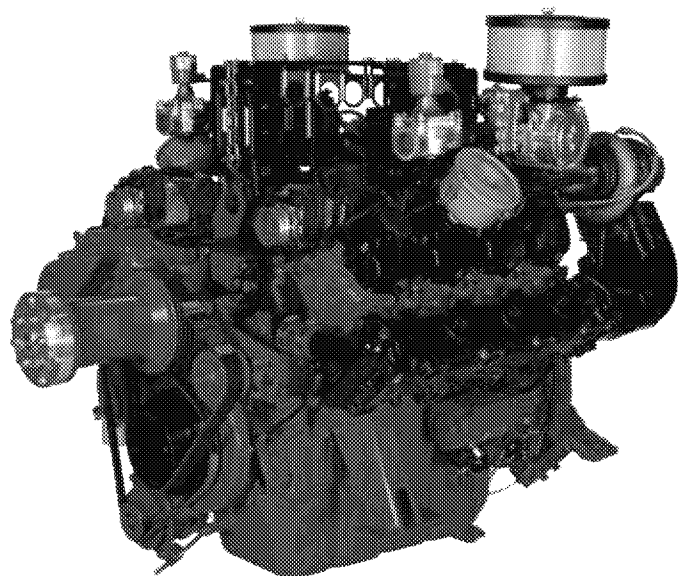
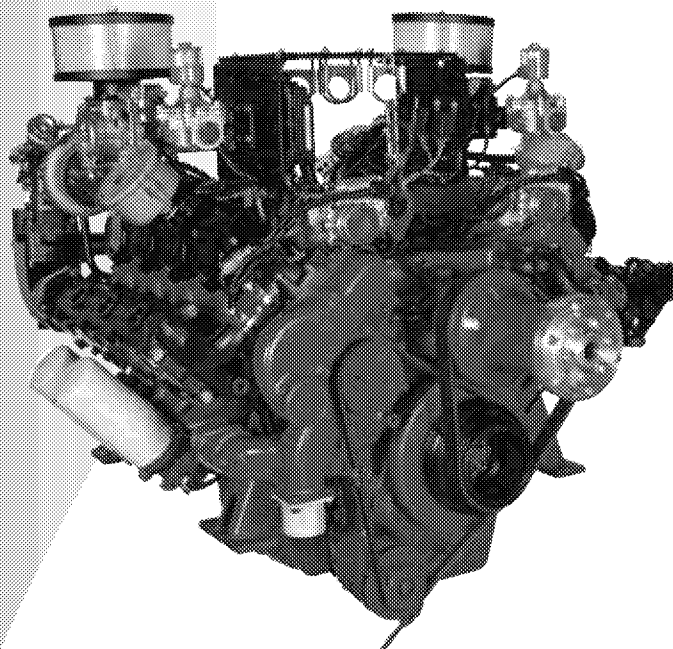
The NGE 8.1L is a US-EPA CERTIFIED Natural Gas and Propane engine. Built upon a proven marine-diesel grade block, the 6-Cylinder In-line, turbocharged and after-cooled engine features replaceable wet liners and watercooled exhaust. The engine was developed from the block-up to be a reliable and durable power unit.

Superior engine performance is provided by an ECU that integrates and coordinates all critical functions including: Governor, Variable Ignition Timing, Air:Fuel Ratio Control, Knock Suppression and Engine Protection.

NGEngines is an extension of the Power Solutions, Inc. (PSI) product line which is based upon GM blocks from 650cc to 8.1L. The NGE product lineup has 5 models with displacements of 8.1L, 11.1L, 14.6L, 18.3L and 21.9L. All PSI/NGE engines feature the same fuel systems and controls simplifying your application development and support.



# 14.6L NGE ENGINE



## FEATURES / OPTIONS

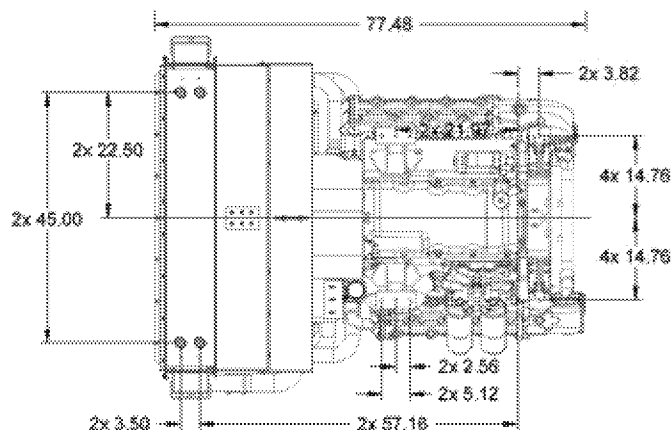
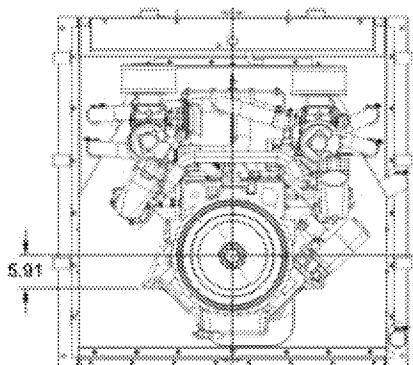
- US -EPA Certified and CARB Compliant
- Power: 300kWm Standby on NG
- Integrated Engine Controls Protection with CANBUS
- 50c Ambient Cooling Capacity
- UL2200 Compliant or Listed Components
- MasterTrak Telematics service (included for 1 year)

## DESCRIPTION

The NGE 14.6L is a US-EPA CERTIFIED Natural Gas and Propane engine. Built upon a proven marine-diesel grade block, the 8-Cylinder V, turbocharged and after-cooled engine features replaceable wet liners and watercooled exhaust. The engine was developed from the block-up to be a reliable and durable power unit.

Superior engine performance is provided by an ECU that integrates and coordinates all critical functions including: Governor, Variable Ignition Timing, Air:Fuel Ratio Control, Knock Suppression and Engine Protection.

NGEngines is an extension of the Power Solutions, Inc. (PSI) product line which is based upon GM blocks from 650cc to 8.1L. The NGE product lineup has 5 models with displacements of 8.1L, 11.1L, 14.6L, 18.3L and 21.9L. All PSI/NGE engines feature the same fuel systems and controls simplifying your application development and support.







# 14.6L

	UNITS		14.6L CAC			
	STD	METRIC	1500		1800	
<b>GENERAL ENGINE MOUNTING</b>						
Type	N/A		V-type 4 cycle			
Number of cylinders	N/A		8			
Aspiration	N/A		Turbo Charge Air Cooled			
Bore	in	mm	5.04	128	5.04	128
Stroke	in	mm	5.59	142	5.59	142
Displacement	in^3	L	892	14.62	892	14.62
Compression Ratio	N/A		10.5			
Mean Piston Speed	ft/min	m/s	1397.5	7.1	1677	8.52
Rated Load	Hp	kW	339	253	402	300
MEP (@ rated Load)	psi	kPa	201	14	198	14
Rotation Viewed from Flywheel	N/A		Counter Clockwise			
Firing Order	N/A		1-5-7-2-6-3-4-8-1			
<b>DRY WEIGHT</b>						
Fan to Flywheel	lb	kg	3150	1429	3150	1429
Rad to Flywheel	lb	kg	4450	2018	4450	2018
<b>WET WEIGHT</b>						
Fan to Flywheel	lb	kg	3291	1475	3291	1475
Rad to Flywheel	lb	kg	4955	2262	4955	2262
<b>CG</b>						
Distance from FW housing	in	mm	6.26	159	6.26	159
Distance above center of crankshaft	in	mm	17.66	448.5	17.66	448.5
<b>ENGINE MOUNTING</b>						
Maximum Allowable Bending Moment at Rear of Block	lb ft	N m	0	0	0	0
Moment of Inertia About Roll Axis	lb ft^2	kg m^2	0	0	0	0
Flywheel housing	N/A		SAE No. 1			
Flywheel	N/A		No. 14			
<b>EXHAUST SYSTEM</b>						
Type						
Maximum allowable Back pressure	in HG	kPa	3	10.2	3	10.2
Standard Catalyst Back pressure	in HG	kPa	1.5	5.1	1.5	5.1
Exhaust Outlet Pipe Size						
Maximum Turbine Inlet Temperature	F	C	1382	750	1382	750
Exhaust Flow at Rated Power	lb/hr	kg/hr	2099	952	2492	1131
Exhaust Flow at Rated Power @1350F	cfm	m^3/min	1596	45.2	1895	53.6
<b>AIR INDUCTION SYSTEM</b>						
Maximum allowable Intake Air Restriction with Air Cleaner						
Clean	inH2O	kPa	5	1.24	5	1.24
Dirty	inH2O	kPa	15	3.74	15	3.74
Combustion Air required	lb/hr	kg/hr	1975	896	2346	1064
Combustion Air required	cfm	m^3/min	448	13.1	532	15.6
<b>ELECTRICAL SYSTEM</b>						
Minimum Recommended Battery Capacity	AH		200			
Cold Cranking Current						
Engine only	CCA		1000			
Engine with Drive train	CCA		1000			
Maximum Allowable Resistance of Starting Circuit	Ohms		0.002			
Starting Motor Power	HP	kW	9.4	7	9.4	7
Battery Charging Alternator						
Voltage	Volts		24			
Current	Amps		45			

	UNITS		14.6L CAC			
	STD	METRIC	1500	1800		
<b>COOLING SYSTEM</b>						
Coolant Capacity						
Engine only	gal	L	9.5	43.2	9.5	43.2
Engine with Radiator	gal	L	50	227	50	227
Engine Coolant Flow	gal/min	L/min	151	570	180	680
Water Pump Speed	RPM		0	0	0	0
Heat rejected to Cooling water at rated Load	btu/min	kcal/sec	13094	55	16189	68
Maximum Intake Air Temperature (IAT)	F	C	155	68	155	68
ECU IAT Warning	F	C	0	0	0	0
ECU IAT Shutdown	F	C	0	0	0	0
Maximum Coolant Friction Head External to the engine	psi	bar	5.8	0.4	5.8	0.4
Maximum Air Restriction Across a Radiator	inH2O	mmH2O	0.5	12.8	0.5	12.8
Standard Thermostat Range						
Cracking Temperature	F	C	160	71	160	71
Full Open Temperature	F	C	185	85	185	85
Maximum Output Pressure of Engine Water Pump						
Maximum Allowable Pressure Cap	psi	bar	14.7	1	14.7	1
Ambient Clearance Open Genset (water)						
Specified	F	C	122	50	122	50
Ambient Clearance (Oil)						
Specified	F	C	122	50	122	50
Maximum Allowable Top Tank Temperature	F	C	230	110	230	110
ECU Warning	F	C	220	104	220	104
ECU Shutdown	F	C	230	110	230	110
Fan Power	HP	kW	13	9.7	22	16.4
Fan Diameter, including blades	in	mm	45	1143	45	1143
Fan Speed	RPM		1200		1440	
Cooling Fan Air Flow @ 1" H2O Stat. Press and 125F @ Rad Charge Air Cooler	CFM	m <sup>3</sup> /min	25714	728.13	30000	849.5
Compressor Outlet Temperature	F	C	0	0.0	0	0.0
Compressor Flow Rate	CFM	m <sup>3</sup> /min	0	0.0	809	22.9
<b>LUBRICATION SYSTEM</b>						
Oil Specification	SAE 15W-40 Low/Ash Gas engine oil (.25-.5% by wt), API CD/CF or higher					
Oil Pressure						
Idle						
Min	Psi	Bar	13	0.9	13	0.9
Max	Psi	Bar	43.5	3	43.5	3
Rated Speed						
Min	Psi	Bar	43.5	3	43.5	3
Max	Psi	Bar	94.5	6.5	94.5	6.5
Maximum Allowable Oil Temperature	F	C	230	110	230	110
Engine Oil Capacity						
Min	Qts	L	26.5	25	26.5	25
Max	Qts	L	32.75	31.0	32.75	31.0
Oil Filter Capacity	Qts	L	7.5	7.1	7.5	7.1
<b>FUEL SYSTEM</b>						
Low Pressure Dry Processed Natural Gas (Spec)						
Fuel Composition						
Maximum EPR Rated Pressure	psi	kPa	1	6.89	1	6.89
Maximum Running pressure to Electronic Pressure Regulator (EPR)	inH2O	kPa	11	2.74	11	2.74
Minimum Running pressure to EPR	inH2O	kPa	7	1.74	7	1.74
Minimum Gas Supply Pipe Size			2 x 1-1/4" NPT			
Low Pressure Vapor Propane (HD5)						
Fuel Composition						
Maximum EPR Rated Pressure	psi	kPa	1	6.89	1	6.89
Maximum Running Pressure to EPR	inH2O	kPa	11	2.74	11	2.74
Minimum Running Pressure to EPR	inH2O	kPa	7	1.74	7	1.74
Minimum LPG Supply Pipe Size			2 x 1-1/4" NPT			

The preceding pipe sizes are only suggestions and piping sizes may vary with temperature, pressure, distance from supply and application of local codes. Gas must be available at adequate volume and pressure for engine at the EPR.

## NGE 14.6L Fuel Consumption Data

NG 60 Hz				
Power at Flywheel	kg/hr	m3/hr	ft3/hr	BTU/hr
322.0	72.0	90.0	3,177	3,208,770
264.5	60.1	75.1	2,651	2,677,057
176.3	40.8	51.0	1,799	1,817,154
88.2	23.7	29.6	1,044	1,054,598
34.8	13.5	16.8	594	600,310

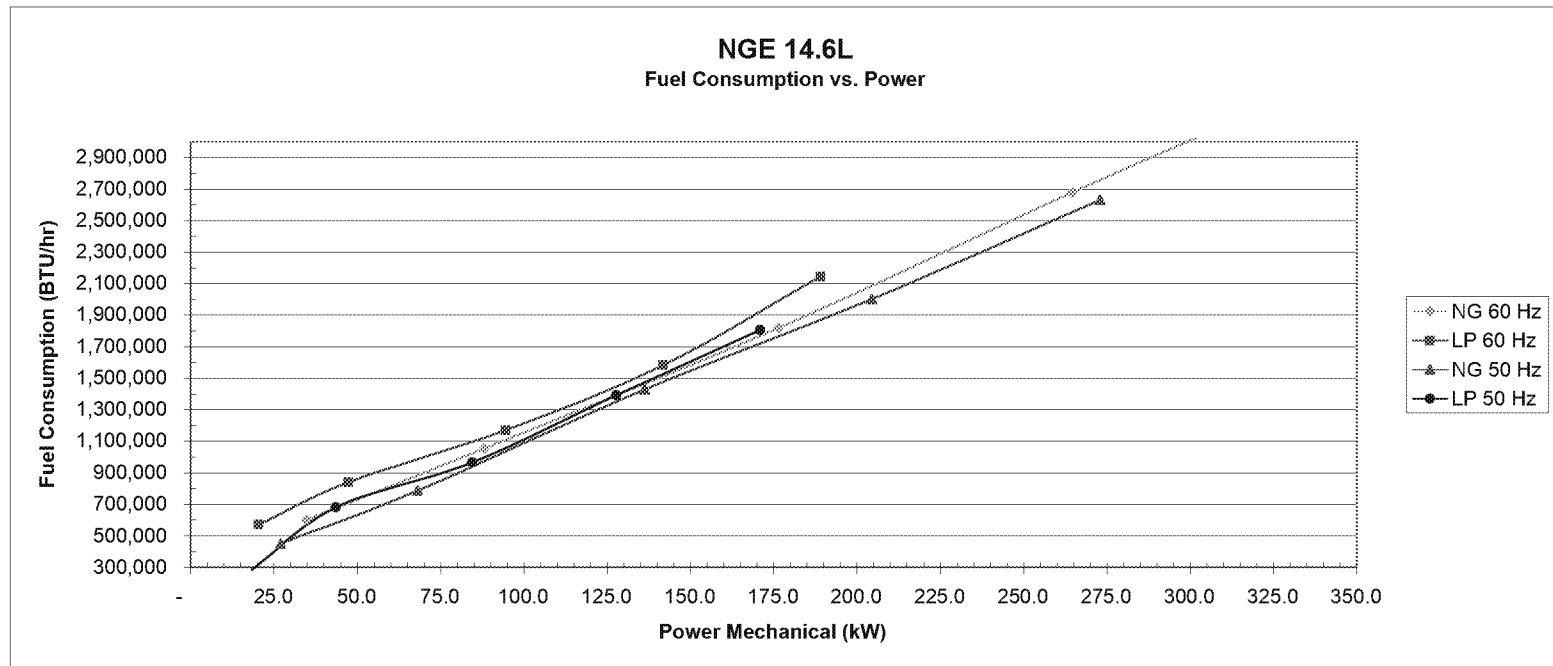
NG 50 Hz				
Power at Flywheel	kg/hr	m3/hr	ft3/hr	BTU/hr
273.0	59.0	73.8	2,603	2,629,409
204.4	44.9	56.1	1,981	2,000,492
136.3	32.0	40.0	1,414	1,427,764
68.1	17.6	22.0	778	786,081
27.0	10.1	12.7	447	451,044

Gas Properties		
	kg/m3	BTU/ ft3
LP Density	1.882	2316
NG Density	0.8	1010

LP 60 Hz				
Power at Flywheel	kg/hr	m3/hr	ft3/hr	BTU/hr
189.0	49.4	26.2	926	2,143,890
141.8	36.4	19.3	683	1,581,471
94.5	26.9	14.3	505	1,170,289
47.3	19.3	10.3	362	838,180
20.4	13.1	7.0	246	569,330

LP 50 Hz				
Power at Flywheel	kg/hr	m3/hr	ft3/hr	BTU/hr
171.0	41.6	22.1	780	1,805,801
127.8	32.0	17.0	601	1,391,694
84.5	22.2	11.8	417	964,697
43.7	15.7	8.3	294	680,033
18.3	6.6	3.5	123	284,665

Power Ratings at Flywheel			
	Continuous	Prime	Stand-By
	kW	kW	kW
NG 50 Hz		230	253
NG 60 Hz		270	300
LP 50 Hz			171
LP 60 Hz			189



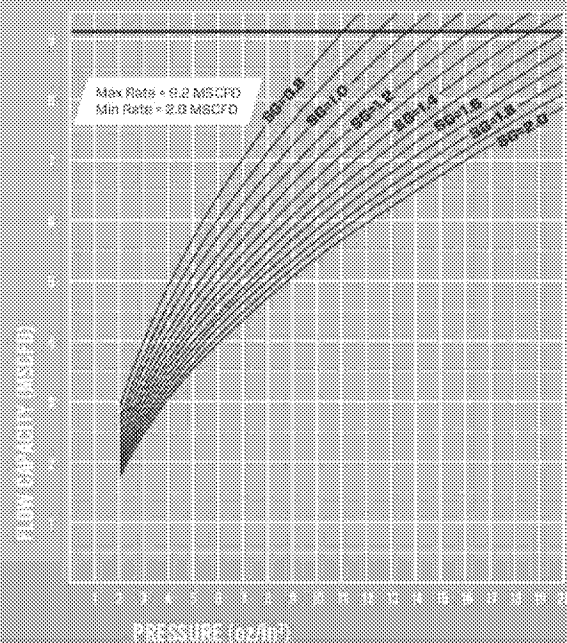


EFFICIENT  
CLEAN  
SAFE

**CIMARRON**  
ENERGY

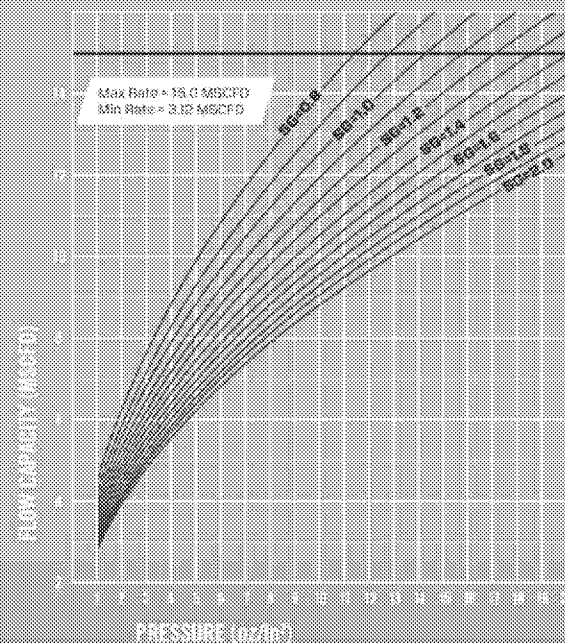
Quad O  
*Enclosed  
Combustors*

**CALCULATED FLOW CAPACITY CURVE**  
24" STANDARD ECD (2-24-64-0000)



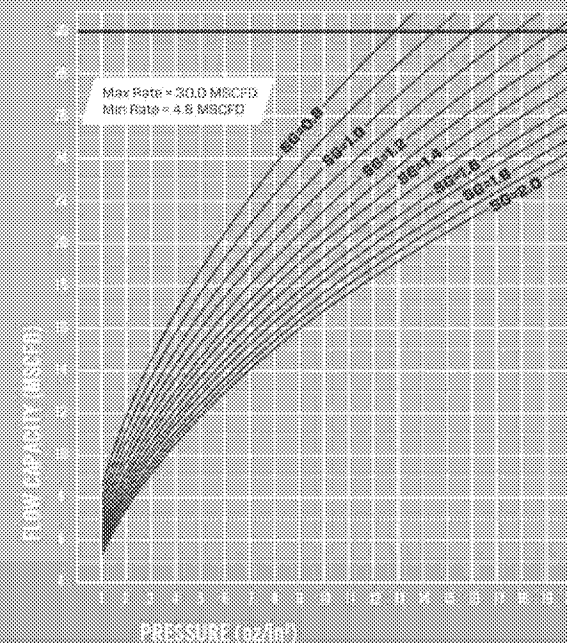
**24" STANDARD**

**CALCULATED FLOW CAPACITY CURVE**  
30" STANDARD ECD (2-30-88-0000)



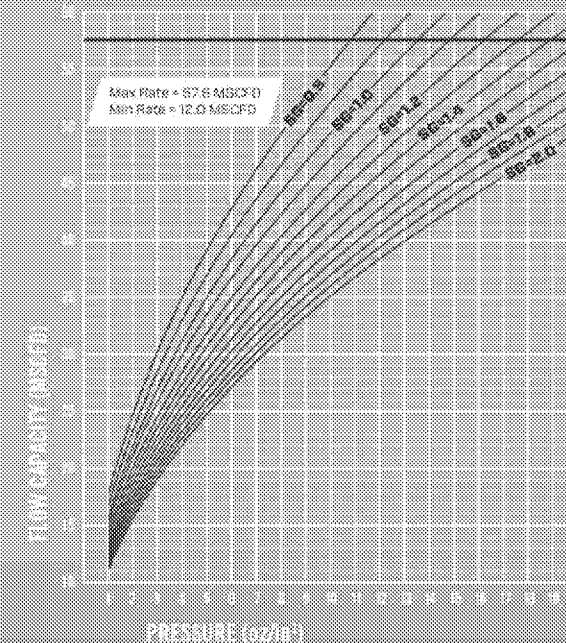
**30" STANDARD**

**CALCULATED FLOW CAPACITY CURVE**  
48" STANDARD ECD (2-48-210-0000)



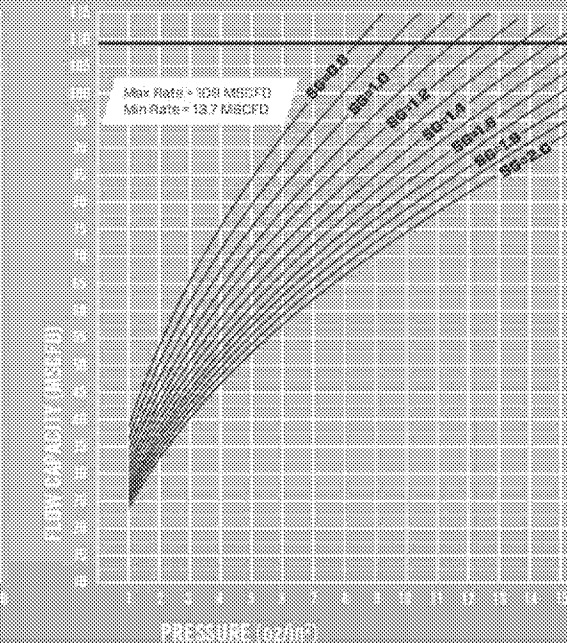
**48" STANDARD**

**CALCULATED FLOW CAPACITY CURVE**  
60" STANDARD ECD (3-60-440-0000)

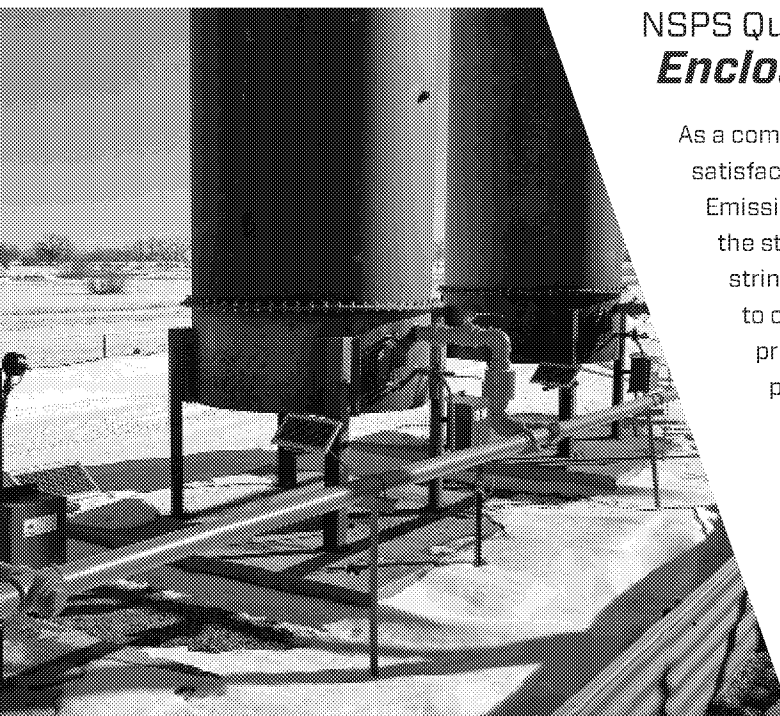


**60" STANDARD**

**CALCULATED FLOW CAPACITY CURVE**  
48" HIGH VOLUME ECD (3-48HV-90-0000)



**48" HIGH VOLUME**

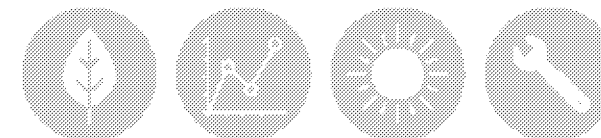


## NSPS Quad O *Enclosed Combustors*

As a company committed to both environmental safety and client satisfaction, Cimarron is proud to offer our Storage Tank VOC Emission Control Devices (ECD's). Pioneered in Colorado prior to the state becoming one of the first in the nation to implement stringent emission cutting rules, Cimarron's ECDs are designed to capture and combust VOC emissions from the oil/condensate production storage tanks. These enclosed combustor units provide a clean, safe, and efficient solution for eliminating hazardous vapors and ensuring regulatory compliance. All Cimarron's ECD's have been manufacturer performance tested in accordance with the EPA's strict new NSPS 0000 emission standards for storage vessel control devices. Designed for both low volume and high volume applications, Cimarron flares are enclosed for maximum safety benefits. In addition, the units are both easy to install and user friendly, offering reliable operations and low-maintenance care.

## *Design Features and Options*

- Manufacturer Performance Tested as per NSPS 0000 §60.5413(d)
- Demonstrates VOC Destruction Efficiency >99%
- Eliminates the requirement for in-field testing to demonstrate continuous compliance.
- Solar powered BMS and data logging functions available
- Cimarron actuator package for low flow and flameout shutdown
- Drip tank for free liquid removal
- User friendly and easy to install



Quad O  
**Enclosed Combustors**

## Specifications

Unit	Max / Min Flowrate Range <sup>a</sup>	Heat Release <sup>b</sup>	Overall Dimensions (pad not included)	Inlet Connection	Flame Cell size <sup>c, d</sup>
24" STD	9.2 / 2.0 MSCFD	.98 MMBtu/hr	24"D x 8.5'H	3" NPT	24"
30" STD	15 / 3.12 MSCFD	1.6 MMBtu/hr	30"D x 8.5'H	3" NPT	30"
48" STD	30 / 4.8 MSCFD	3.2 MMBtu/hr	48"D x 12'H	3" NPT	48"
60" STD	57.6 / 12.0 MSCFD	6.1 MMBtu/hr	60"D x 12.5'H or 16.5'H	3" NPT	60"
48" HV	109 / 13.7 MSCFD	11.7 MMBtu/hr	48"D x 25'H	3" NPT	(4) 24"

## Available Options

<b>ARC Burner Management and Ignition systems</b>	ARC—basic light and reight functionality. Flexible and easy to upgrade.
	ARC Hybrid—Upgrade to the ARC system. Facilitates inlet gas shutdown in the event of a pilot failure. Requires actuator option below
	ARC SAU— Upgrade to the ARC system. Allows for low flow condition shutdown and allows tanks to build pressure. Std setup is 2 oz closure and 5 oz open. Ranges are adjustable and can be modified in the field. Requires actuator option below.
<b>Standard Drip Pot</b>	24" x 48" w/ 4" FNPT connections. Liquid capacity 90 gal
	20" x 36" w/ 3" FNPT connections. Liquid capacity 46 gal
	16" x 36" w/ 3" FNPT connections. 5' height. Liquid capacity 29 gal.
	16" x 36" w/ 3" FNPT connections. 7' height. Liquid capacity 29 gal.
<b>Custom Drip Pot</b>	Required size/connections/capacity
<b>Cimarron "Sentry" Datalogger</b>	USB port for easy data downloads. Single analog input for pilot flame sense or thermocouple data. Two contact switch closure inputs
<b>Actuator Package</b>	Cimarron piston-style actuator for burner management system control. Required for Hybrid and SAU ARC systems. Ranges are adjustable and can be modified in the field.
<b>Safety Float Check Valve option for Drip Pot</b>	4" x 6"
	3" x 6"
<b>Stack thermocouple</b>	18" Type K thermocouple with wire
<b>Concrete Pad</b>	Standard concrete pad requested
<b>High Temp Kit (HV unit excluded)</b>	All stainless steel jet kit
<b>Inline Flame arrestor</b>	2" Wenco Flame arrestor
<b>Header plumbing (HV unit only)</b>	3" Wenco Flame arrestor
	2" header plumbing from integral drip box to burner manifold
	3" header plumbing from integral drip box to burner manifold

We would be glad to discuss your production equipment needs. Please contact us at your convenience at **405-928-7373** or visit our website at **CimarronEnergy.com**, where you will find a design input sheet if you would like us to address your specific requirements.



**ATTACHMENT F**  
**FEDERAL RULE APPLICABILITY**

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A breakdown of federal regulations will be discussed, including whether or not a rule is applicable and why or why not. Henceforth, the Ute Tribal 1-21-3-2E production facility site will be referred to as either the "Site" or the "Facility" throughout this document.

**40 CODE OF FEDERAL REGULATIONS (CFR) 60  
STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES**

***Subpart JJJJ - Stationary Spark Ignition Internal Combustion Engines***

Section 60.4230(a) states "The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (5) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator." As an operator, Section 60.4230(a)(3) reads "Owners and operators of stationary SI ICE that commence construction after June 12, 2006, where the stationary SI ICE are manufactured:

- (i) On or after July 1, 2007, for engines with a maximum engine power greater than or equal to 500 HP (except lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP);
- (ii) (ii) on or after January 1, 2008, for lean burn engines with a maximum engine power greater than or equal to 500 HP and less than 1,350 HP;
- (iii) (iii) on or after July 1, 2008, for engines with a maximum engine power less than 500 HP; or
- (iv) (iv) on or after January 1, 2009, for emergency engines with a maximum engine power greater than 19 KW (25 HP).

The engines installed at the site are stationary spark ignition internal combustion engines (ICE). The engines have a maximum engine power of less than 500 HP and were manufactured after 2008, therefore are subject to NSPS Subpart JJJJ.

**40 CFR 63  
NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS  
FOR SOURCE CATEGORIES**

***Subpart ZZZZ – Reciprocating Internal Combustion Engines (RICE)***

Section 63.6580 states the purpose of Subpart ZZZZ as "establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limitations and operating limitations." Section 63.6585 explains "You are subject to this subpart if you own or operate a stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand." Section 63.6590(a)(1)(iii) reads, "For stationary RICE located at an area source of HAP emissions, a stationary RICE is existing if you commenced construction or reconstruction of the stationary RICE before June 12, 2006." Section 63.6590(a)(2)(iii) reads, "A stationary RICE located at an area source of HAP emissions is new if you commenced construction of the stationary RICE on or after June 12, 2006". Section 63.6590(c) reads "An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 Subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part." Section 63.6590(c)(1) reads "A new or reconstructed stationary RICE located at an area source."

The Site is an area source emitting less than 10 tons per year of any single HAP and less than 25 tons per year of any combination of HAPs. Construction of the engine at the Facility occurred before June 12, 2006. Therefore, the engines are considered existing stationary RICE located at an area source. Subpart ZZZZ will apply to these engines.



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STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES**

***Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984***

Subpart Kb applies to each storage vessel with a capacity greater than or equal to 75 cubic meters (472 bbls) that is used to store volatile organic liquids. However, the subpart does not apply to storage vessels with a design capacity less than or equal to 1,589.874 cubic meters (10,000 bbls) used for petroleum or condensate stored, processed, or treated prior to custody transfer. Each storage tank on site will be less than 1,589.874 cubic meters and will be used for petroleum or condensate stored, processed, or treated prior to custody transfer. Therefore, NSPS Subpart Kb will not apply to this facility.

***Subpart KKK - Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011***

Subpart KKK applies to onshore natural gas processing plants. Natural gas processing plant is defined as any processing site engaged in the extraction of natural gas liquids from field gas, fractionation of mixed natural gas liquids to natural gas products, or both. This facility will not extract natural gas liquids from field gas; therefore, NSPS Subpart KKK will not apply to this facility.

***Subpart LLL—Standards of Performance for SO<sub>2</sub> Emissions From Onshore Natural Gas Processing for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011***

Subpart LLL applies to sweetening units and sweetening units followed by sulfur recovery units that process natural gas. This facility will not have a sweetening unit; therefore, NSPS Subpart LLL will not apply to this facility.

***Subpart OOOO—Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution for which Construction, Modification or Reconstruction Commenced after August 23, 2011, and on or before September 18, 2015***

Section 60.5365 states "You are subject to the applicable provisions of this subpart if you are the owner or operator of one or more of the onshore affected facilities listed in paragraphs (a) through (g) of this section for which you commence construction, modification or reconstruction after August 23, 2011..."

If this well site addressed in this NOI was constructed, modified, or reconstructed after August 23, 2011 and before September 18, 2015, then certain sections of Subpart OOOO may apply. The potential applicable sections are listed below.

"(a) Each gas well affected facility, which is a single natural gas well... " The well(s) is an oil well. Therefore, this particular section of this rule will not apply.

"(b) Each centrifugal compressor affected facility..." There are no centrifugal compressors found at the well site. Therefore, this particular section of this rule will not apply.

"(c) Each reciprocating compressor affected facility..." There are no reciprocating compressors found at the well site. Therefore, this particular section of this rule will not apply.

"(d)(1) For the oil production segment (between the wellhead and the point of custody transfer to an oil pipeline), each pneumatic controller affected facility..." There are no continuous bleed natural gas-driven pneumatic controllers operating at a natural gas bleed rate greater than 6 scfh found at the well site. Therefore, this particular section of this rule will not apply.

"(e) Each storage vessel affected facility, which is a single storage vessel located in the oil and natural gas production segment, natural gas processing segment or natural gas transmission and storage segment, and has the potential for VOC emissions equal to or greater than 6 tpy as determined according to this section by October 15, 2013 for Group 1 storage vessels and by April 15, 2014, or 30 days after startup (whichever is later) for Group 2 storage vessels..." If the well(s) feeding the storage vessels located at the well site are completed, recompleted, or undergo a modification within the applicability dates, then this section may apply. The potential for VOC emissions



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will be calculated using a generally accepted model or calculation methodology, based on the maximum average daily throughput determined for a 30-day period of production prior to the applicable emission determination deadline specified in this subsection. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a federal, state, local or tribal authority.

"(f) The group of all equipment, except compressors, within a process unit is an affected facility..." There are no process units at this well site. Therefore, this particular section of this rule will not apply.

"(g) Sweetening units located at onshore natural gas processing plants..." This well site is not a natural gas processing plant. Therefore, this particular section of this rule will not apply.

***Subpart OOOOa - Standards of Performance for Crude Oil and Natural Gas Facilities for which Construction, Modification, or Reconstruction Commenced after September 18, 2015***

Section 60.5365a states "You are subject to the applicable provisions of this subpart if you are the owner or operator of one or more of the onshore affected facilities listed in paragraphs (a) through (j) of this section for which you commence construction, modification, or reconstruction after September 18, 2015."

If the well site addressed in this Notice of Intent (NOI) are constructed, modified, or reconstructed after September 18, 2015, then certain sections of Subpart OOOOa may apply. The potential applicable sections are listed below.

"(a) Each well affected facility, which is a single well that conducts a well completion operation following hydraulic fracturing or refracturing..." Oil wells that have undergone well completions operations before the applicability deadline are not subject to this particular section. If the well(s) undergoes a well completions operation following hydraulic fracturing or refracturing after the applicability deadline then this particular section will apply at that time.

"(b) Each centrifugal compressor affected facility, which is a single centrifugal compressor using wet seals...." There are no centrifugal compressors located at the well site. Therefore, this particular section does not apply.

"(c) Each reciprocating compressor affected facility, which is a single reciprocating compressor...." There are no reciprocating compressors located at the well site. Therefore, this particular section does not apply.

"(d)(1) Each pneumatic controller affected facility not located at a natural gas processing plant, which is a single continuous bleed natural gas-driven pneumatic controller operating at a natural gas bleed rate greater than 6 scfh..." There are no continuous bleed natural gas-driven pneumatic controllers operating at a natural gas bleed rate greater than 6 scfh located at the well site. Therefore, this particular section does not apply.

"(e) Each storage vessel affected facility, which is a single storage vessel with the potential for VOC emissions equal to or greater than 6 tpy as determined according to this section..." If the well(s) feeding the storage vessels located at the well site are completed, recompleted, or undergo a modification after the applicability deadline, then this section may apply. The potential for VOC emissions will be calculated using a generally accepted model or calculation methodology, based on the maximum average daily throughput determined for a 30-day period of production prior to the applicable emission determination deadline specified in this subsection. The determination may take into account requirements under a legally and practically enforceable limit in an operating permit or other requirement established under a federal, state, local or tribal authority.

"(f) The group of all equipment within a process unit is an affected facility..." There are no process units located at the well site. Therefore, this particular section does not apply.

"(g) Sweetening units located at onshore natural gas processing plants that process natural gas produced from either onshore or offshore wells..." The well site is not a natural gas processing plant. Therefore, this particular section of this rule does not apply.

"(h)(2) For well sites, each pneumatic pump affected facility, which is a single natural gas-driven diaphragm pump..." There are no pneumatic pumps located at the well site. Therefore, this particular section does not apply.

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"(i) Except as provided in §60.5365a(i)(2), the collection of fugitive emissions components at a well site, as defined in §60.5430a, is an affected facility..." If the well site is constructed, modified, or reconstructed after the applicability deadline, then this section will apply.

"(j) The collection of fugitive emissions components at a compressor station, as defined in §60.5430a, is an affected facility..." This well site is not a compressor station. Therefore, this particular section does not apply.

**40 CFR 63**  
**NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS**  
**FOR SOURCE CATEGORIES**

Subpart HH applies to owners and operators of triethylene glycol (TEG) dehydration units. This facility will not have a TEG dehydration unit; therefore, MACT Subpart HH will not apply to this facility.

Subpart HHH applies to owners and operators of natural gas transmission and storage facilities that are major sources of HAP emissions. This facility will not be a major source of HAP emissions; therefore, MACT Subpart HHH will not apply to this facility.